CALFED
BAY-DELTA
PROGRAM

STORAGE AND CONVEYANCE REFINEMENT STUDY

COMBINED ENVIRONMENTAL -- AGRICULTURAL AND URBAN WATER SUPPLY EVALUATION USING THE CALFED POST-PROCESSING SPREADSHEET OPERATIONS MODEL

INITIAL RESULTS

PRELIMINARY DRAFT

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Initial Sensitivity Evaluation of Operational Parameters and Storage Capacities Using the CALFED Post-Processing Operations Model

Combined Environmental -- Agricultural and Urban Water Supply Evaluation

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Initial Sensitivity Evaluation of Operational Parameters and Storage Capacities Using the CALFED Post-Processing Operations Model

Combined Environmental -- Agricultural and Urban Water Supply Evaluation

OVERVIEW OF EVALUATION

Introduction

The CALFED Post-Processing Operations Model was developed to evaluate the sensitivity of various operational parameters and physical capacities of potential new storage and conveyance facilities in terms of 1) environmental water supply benefits, 2) agricultural and urban water supply benefits, and 3) combined environmental -- agricultural and urban water supply benefits. This relatively simplistic model is suitable for analyzing the effects of various storage operation rules and goals, identifying critical external constraints, and providing initial refinement to the ranges of storage and conveyance capacities to be considered in future studies. Information developed from this evaluation will be used to guide more detailed studies, including DWRSIM system operation studies.

The spreadsheet-based CALFED Post-Processing Operations Model uses the results of DWRSIM benchmark operation studies as input. New storage and conveyance facility operations are simulated assuming user-defined environmental demands and surplus water supplies, unused conveyance facility capacities, and unmet agricultural and urban demands as defined by DWRSIM. While this model provides useful initial information, two important limitations must be considered when interpreting model results. First, the CALFED Post-Processing Operation Model simulations do not integrate the operations of new storage and conveyance components with operation of existing facilities. Second, the model simulations do not dynamically model Delta processes. While these simulations are constrained by surplus Delta water, Delta export limitations, and available physical capacities as defined by DWRSIM, specific in-Delta flows and salinities are not evaluated. Future DWRSIM and Delta hydrodynamic modeling studies must be used to assess the impacts of both of these limitations.

In the evaluation documented in this report, the CALFED Post-Processing Operations Model was used to assess the sensitivity of various operational parameters and storage capacities of upstream of Delta off-stream and south of Delta off-aqueduct storage facilities. In preceding studies, separate evaluations were conducted to identify potential benefits from new storage facilities dedicated to environmental water supply and agricultural and urban water supply. In each of these evaluations, sets of parameters were developed which collectively bracket ranges of potential operations. These operations conditions include two operational goals implemented under various external conditions. These goals termed Normal Period Supply Operation and Dry period Supply Operation in this report, are generally exclusive.

The Normal Period Supply Operation goal is to maximize supplies over normal hydrologic periods. This goal is achieved by imposing no storage carryover requirement and releasing water

from storage whenever unmet demand exists. Storage operations that target maximum supplies over normal long-term hydrologic periods usually result in limited supplies available in extended dry periods. The Dry Period Supply Operation goal is to maximize supplies in the driest years of normal hydrologic sequences. This goal is achieved by reducing the amount of water delivered from storage in any given year through methods such as imposing carryover requirements. Storage operations that target maximum supplies in extended dry periods generally have a high cost in terms of reduced supplies over normal long-term hydrologic periods.

As described in previous evaluations, a minimum Delta outflow target of 12,000 cfs for the months of January through June is used as a surrogate for environmental water demands for these evaluations. Because the CALFED spreadsheet operations model uses a monthly time step, more detailed evaluation of flows is not possible with this tool. However, in actual operation, the volume of water released from storage towards the 12,000 cfs target might be used to create higher pulses of flow for shorter durations, if this operation was deemed more environmentally beneficial.

Using this target minimum Delta outflow surrogate approach, environmental water supply benefits are measured in this evaluation by averaging monthly flow rates up to a maximum of 12,000 cfs for January through June of each water year. Any flow above 12,000 cfs is not counted as part of the environmental water supply benefits. Note that the result of this computation is significantly lower than and not comparable to *total* average annual Delta outflow. For simplicity in this evaluation, this average of January through June Delta outflows up to 12,000 cfs is termed *Environmental Delta Outflow.*

As also described in previous evaluations, south of Delta SWP and CVP demands are used as a surrogate for agricultural and urban water supply demands in these evaluations. In actual practice, agricultural and urban water supply benefits from new storage might be designated to a subset of SWP and CVP users, or other upstream of Delta or south of Delta agricultural and urban water users.

Five statistical measures of water supply benefits for either environmental purposes or agricultural and urban purposes are included in this analysis, as described in Table NC-2. Water supply benefits, as described by these five statistical measures, were estimated for each of the sets of operation conditions over the range of maximum storage volumes and facilities allocation factors. While this information should not be considered definitive, this evaluation illustrates the potential for combined environmental -- agricultural and urban water supply benefits from upstream of Delta storage facilities and the effects of various external conditions and operational goals. The information developed in this evaluation may be used to provide an initial refinement of the range of storage volumes of potential upstream of Delta storage facilities which should be considered in future studies.

In this evaluation, a facilities allocation factor was used to direct the portion of storage volume and storage inflow/outflow conveyance capacity dedicated to environmental water supply and agricultural and urban water supply purposes. This facilities allocation factor was defined such

that 0 percent indicates that all facilities are dedicated to environmental purposes while 100 percent indicates that all facilities are dedicated to agricultural and urban water supply purposes. Any factor ranging from 0 to 100 percent may be input into the model. Under the assumptions built into the model, the storage volume for either purpose (total volume multiplied by the appropriate facilities allocation factor) always remains dedicated to that purpose alone. On the other hand, the storage inflow/outflow conveyance capacity for either purpose is only dedicated as a first priority to that purpose. If storage conveyance capacity dedicated to either environmental or agricultural and urban purposes is not in use, it may be employed for the other purpose.

Two parallel evaluations were completed for combined environmental -- agricultural and urban water supply benefits with 1) upstream of Delta off-stream storage, and 2) south of Delta off-aqueduct storage. Results of these evaluations are summarized in this section. More detailed results are provided in the following sections of this report

Upstream of Delta Off-Stream Storage

Sixteen distinct operation conditions were considered in this evaluation of upstream of Delta off-stream storage. These operation conditions include combinations of operational goals and external conditions that affect potential water supply benefits. Environmental storage or agricultural and urban storage could be operated for either Normal Period Supply or Dry Period Supply, resulting in four possible combinations of operational goals. Four external conditions, related to the capacity of Banks Pumping Plant and Sacramento River flow event target, were also considered under each combination of operational goals, for a total of sixteen operation conditions. These operation conditions are summarized in Table NC-1.

Input from agency representatives and stakeholders suggested a need to maintain certain geomorphological processes along the upper un-leveed portion of the Sacramento River and biological processes in the river and Bay-Delta system as a condition to operating any new storage facilities. Under this scenario, a minimum peak flow would be required to occur in the river each year or defined number of years before flows would be diverted to storage. In this evaluation, a combination of one-month and two-month volumes are used to represent this minimum flow event target. In addition, for this evaluation the Sacramento River flow event target is implemented annually. Beginning each October the flow target (in addition to existing in-stream and/or navigation requirements) must be met prior to diverting any flows to storage. Once the target is met, only existing in-stream and/or navigation requirements must be met prior to diverting subsequent flows to storage during the water year. An initial sensitivity evaluation indicates the Sacramento River flow event target has negligible effects on storage operations below a flow event target measured by a one-month volume of 500 taf. Between flow event targets measured by one-month volumes of 500 and 1,000 taf, storage operations are sensitive to the target level. Minimal additional effects are seen with targets measured by one-month volumes above 1,000 taf up to the maximum flow event target evaluated, measured by a one-month volume of 1,500 taf. For this evaluation, the Sacramento River flow event target is considered an external condition to be applied in conjunction with existing or expanded Banks

Pumping Plant capacity. To bracket the potential effects in storage operations, low and high Sacramento River flow event targets were selected for evaluation.

The four external conditions considered in this evaluation address the capacity of Banks Pumping Plant, the State Water Project Delta pumping facility, and Sacramento River flow event targets. In order to evaluate the affect on potential storage operations for meeting south of Delta unmet agriculture and urban demands, two pumping plant capacities and two Sacramento river flow event target under both normal period supply and dry period supply operational goals were considered in this evaluation. Under the first external condition, existing Banks Pumping Plant capacity is assumed in conjunction with a low Sacramento River flow event target. Under the second external condition, an expanded Banks Pumping Plant capacity, as proposed in the Department of Water Resources South Delta Improvements Plan, is assumed in conjunction with a low Sacramento River flow event target. Under the third external condition, existing Banks Pumping Plant capacity is assumed in conjunction with a high Sacramento River flow event target. Under the fourth external condition, an expanded Banks Pumping Plant capacity is assumed in conjunction with a high Sacramento River flow event target.

Water supply benefits were evaluated for storage capacities ranging from 100 taf to 5.0 maf for each of the sixteen operation conditions described above. The results of this evaluation may be used to appraise relative relationships between benefits and storage capacities; absolute quantities of benefits must be confirmed by more detailed modeling.

South of Delta Off-Aqueduct Storage

Eight distinct operation conditions were considered in this evaluation of south of Delta off-aqueduct storage. These operation conditions include combinations of operational goals and external conditions that affect potential water supply benefits. Environmental storage or agricultural and urban storage could be operated for either Normal Period Supply or Dry Period Supply, resulting in four possible combinations of operational goals. Two external conditions, related to the capacity of Banks Pumping Plant, were also considered under each combination of operational goals, for a total of eight operation conditions. These operation conditions are summarized in Table SC-1.

The two external conditions considered in this evaluation address the capacity of Banks Pumping Plant, the State Water Project Delta pumping facility. Capacity of Banks Pumping Plant significantly affects storage operations under both the normal period supply and the dry period supply operational goals considered in this evaluation. Under the first external condition, existing Banks Pumping Plant capacity is assumed. Under the second external condition, an expanded Banks Pumping Plant capacity, as proposed in the Department of Water Resources South Delta Improvements Plan, is assumed.

Water supply benefits were evaluated for storage capacities ranging from 100 taf to 3.0 maf for each of the eight operation conditions described above. The results of this evaluation may be used to appraise relative relationships between benefits and storage capacities; absolute quantities of benefits must be confirmed by more detailed modeling.

Summary Results

Results of the two parallel evaluations for combined environmental water supply benefits and agricultural and urban water supply benefits with 1) upstream of Delta off-stream storage, and 2) south of Delta off-aqueduct storage are summarized in this section. More detailed results are provided in the following sections of this report.

Upstream of Delta Off-Stream Storage

This evaluation provides initial quantitative information on combined environmental -- agricultural and urban water supply benefits that might be provided by new upstream of Delta storage facilities. Additional information on water quality benefits, interaction between environmental water supply and agricultural and urban water supply opportunities, interactions with other potential new storage and conveyance facilities, costs of new storage facilities, and environmental acceptability of new storage facilities must all be considered in a further refinement of upstream of Delta water storage facilities. Potential water supply benefits under each of the sixteen operation conditions were evaluated separately. Some general observations drawn from this study are summarized here. More detailed results are described in the following sections of this report.

1. With both environmental storage and agricultural and urban storage operated for Normal Period Supply goals, cumulative benefits (as measured by 71-Year Average Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply) continue to increase as maximum storage volume increases. Although incremental benefits decrease towards the upper end of the range of maximum storage volumes evaluated, under this type of operation there is no obvious limit to effective storage volume below 5.0 maf. For any given maximum storage volume, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 441, 357, 278, 183, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -26, 146, 236, 291, and 333 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, 71-Year average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

   As displayed in Figure 1, near maximum combined benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 398 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 266 taf are achieved. In comparison, maximum combined benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are similar in magnitude but shifted slightly towards agricultural and urban water supply. As shown in Figure 2, with

a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 359 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 314 taf are achieved.

2. With both environmental storage and agricultural and urban storage operated for Dry Period Supply goals, cumulative benefits (as measured by Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply) continue to increase as maximum storage volume increases up to about 4.0 maf. The maximum potential Minimum Annual Environmental Delta Outflow decreases dramatically as the facilities allocation factor is increased from 25 to 50 percent. No benefits to Minimum Annual Environmental Delta Outflow are achieved with a facilities allocation factor of 75 percent. Compared to Minimum Annual Environmental Delta Outflow, Minimum Annual Agricultural and Urban Water Supply Benefits increase more linearly with maximum storage volume. Incremental benefits increase throughout the range of maximum storage volumes evaluated for facilities allocation factors of 25 through 100 percent. However, benefits decrease dramatically as the facilities allocation factor is decreased from 100 to 75 percent between 2.0 and 4.0 maf maximum storage volume. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a facilities allocation factor of 0 percent, Minimum Annual Environmental Delta Outflow reaches a maximum with a maximum storage volume of 2.5 maf. With facilities allocation factors of 100 percent, Minimum Annual Agricultural and Urban Water Supply Benefits reaches a maximum with a storage volumes of 3.0 maf. Relative increases in both Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits with greater storage volumes are achieved only with facilities allocation factors of 25 and 50 percent. With these facilities allocation factors, combined Minimum Annual benefits increase throughout the range of maximum storage volumes evaluated.

   As displayed in Figure 3, near maximum combined benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 636 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 600 taf are achieved. In comparison, Figure 4 displays reduced maximum combined benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target, a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 326 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 502 taf are achieved.

3. With environmental storage operated for Normal Period Supply and agricultural and urban storage operated for Dry Period Supply, cumulative benefits for 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits continue to increase as maximum storage volume increases up to about 5.0 maf. For

any given maximum storage volume, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 448, 372, 301, 203, and 0 taf and Minimum Annual Agricultural and Urban Water Supply increases through the range of 0, 94, 376, 416, and 454 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

As displayed in Figure 5, with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 414 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 174 taf are attained. With a facilities allocation factor of 75 percent maximum combined benefits to 71-Year Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 304 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 851 taf are achieved. Maximum combined 71-year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 25 percen.. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 509 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 118 taf are achieved. Maximum net increase to Minimum Annual Agricultural and Urban Water Supply of 912 taf is achieved with a facilities allocation factor of 100 percent, while Minimum Annual Environmental Delta Outflow is unaffected. In comparison, Figure 6 displays average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target. With a facilities allocation factor of 75 percent maximum combined benefits to 71-Year Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 260 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 861 taf are achieved. Maximum combined 71-year average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 467 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 85 taf are achieved. Maximum net increase to Minimum Annual Agricultural and Urban Water Supply of 881 taf are achieved with a facilities allocation factor of 100 percent, while Minimum Annual Environmental Delta Outflow is unaffected.

4. With environmental storage operated for Dry Period Supply and agricultural and urban storage operated for Normal Period Supply, cumulative benefits for 71-Year Average Annual Agricultural and Urban Water Supply Benefits and Minimum Annual Environmental Delta Outflow continue to increase as maximum storage volume increases up to about 5.0 maf. For any given maximum storage volume, relative 71-Year average annual benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, Minimum Annual Environmental Delta Outflow decreases through the range of 526, 289, 122, 0, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of 3, 191, 266, 320, and 363 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

   As displayed in Figure 7, with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to Minimum Annual Environmental Delta Outflow of 181 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 275 taf are attained. With a facilities allocation factor of 25 percent maximum combined benefits to Minimum Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 198 taf are achieved. Maximum combined 71-year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 75 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 142 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 324 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 375 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 3.5 maf. In comparison, Figure 8 displays average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target. With a facilities allocation factor of 25 percent maximum combined benefits to Minimum Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 235 taf are achieved. Maximum combined 71-year average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 75 percent. Under

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these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 137 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 401 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 381 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 4.0 maf.

5. Potential benefits for both environmental water supply and agricultural and urban water supply from upstream of Delta off-stream storage are reduced with high Sacramento River flow event targets under any combination of operational goals and storage capacities. For example, with a low Sacramento River flow event target, existing Banks Pumping Plant capacity, and Normal Period Supply operation for both environmental and agricultural and urban water supply, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent for 2.0 maf maximum storage volume, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 488, 398, 318, 224, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -15, 130, 211, 242, and 266 taf. With a high Sacramento River flow event target, existing Banks Pumping Plant capacity, and Normal Period Supply operation for both environmental and agricultural and urban water supply, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent for 2.0 maf maximum storage volume, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 313, 256, 194, 120, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -10, 80, 136, 164, and 184 taf. Similar reductions in benefits occur with a high Sacramento River flow event target under other combinations of operational goals and with expanded Banks Pumping Plant capacity.

6. This initial evaluation indicates that new upstream of Delta storage facilities provide greater 71-Year Average Annual Agricultural and Urban Water Supply Benefits with expanded Banks Pumping Plant capacity in comparison to existing Banks Pumping Plant capacity. However, greater Minimum Annual Agricultural and Urban Water Supply Benefits are provided with existing Banks Pumping Plant capacity in comparison to expanded Banks Pumping Plant capacity. This is because the limited Banks Pumping Plant capacity results in a constraint which limits storage releases, so more water is retained for delivery through extended dry periods. For example, consider a 2.0 maf maximum storage volume facility, existing Banks Pumping Plant capacity with a low Sacramento River flow event target, a facilities allocation factor of 50 percent, and a Normal Period Supply operation goals for both environmental storage and agricultural and urban storage. Under these conditions, a net increase in 71-Year Average Annual Environmental Delta Outflow of 318 taf and a net increase in 71-Year Average Annual Agricultural and Urban Water Supply of 211 taf occur. Under the same maximum storage volume, facilities allocation factor, and operational goals, with expanded Banks Pumping Plant capacity and a low Sacramento River flow event target, a net increase in 71-Year Average Annual Environmental Delta Outflow of 278 taf and a net increase in 71-Year Average Annual Agricultural and Urban Water Supply of 236 taf are attained. Similar effects in benefits occur with expanded Banks Pumping Plant capacity

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under other combinations of operational goals and with a high Sacramento River flow event target.

Maximum combined 71-Year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf, a facilities allocation factor of 75 percent, and Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agricultural and urban water supply. A net increase to 71-Year Average Annual Environmental Delta Outflow of 142 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 324 taf are achieved. Maximum combined minimum annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 3.5 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 375 taf are achieved. In comparison, reduced 71-Year environmental water supply and increased 71-Year average annual agricultural and urban water supply benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target, a maximum storage volume of 5.0 maf, a facilities allocation factor of 75 percent, and Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agricultural and urban water supply. A net increase to 71-Year Average Annual Environmental Delta Outflow of 137 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 401 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 775 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 275 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 3.5 maf indicate reduced minimum annual environmental and agricultural and urban water supply.

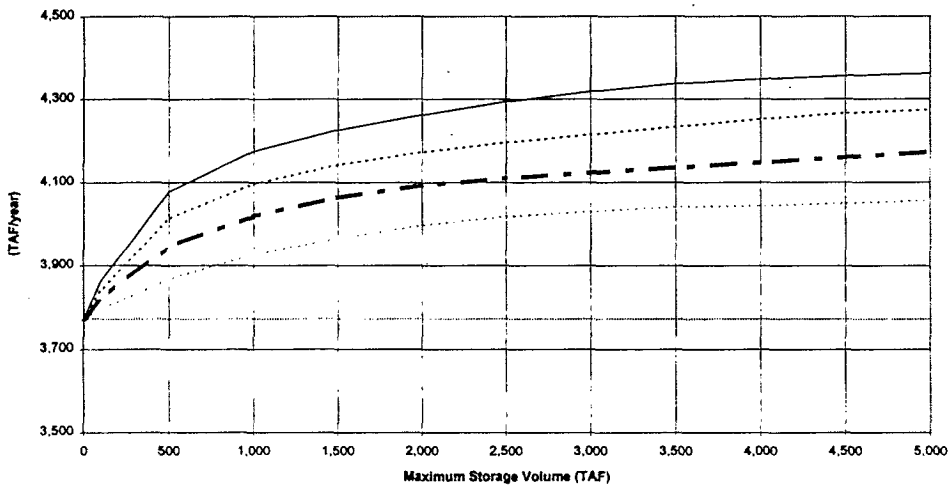
7. Adding any new storage facilities effects agricultural and urban water supply benefits due to reductions in delivery of SWP Interruptible Supply water. Under terms of the Monterrey Agreement, whenever project water is available for delivery to SWP contractors that is not needed for fulfilling approved entitlement water deliveries or for meeting SWP operational commitments, including storage goals for the current or following years, SWP contractors may take delivery of these water supplies in proportion to their respective annual Table A entitlement. For the purposes of this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP table A entitlement water. Adding new storage capacity -- for either environmental or agricultural and urban water supply purposes -- will reduce the availability of unallocated surplus Delta water and thereby reduce the quantity of SWP Interruptible Supply deliveries. If the new storage capacity is designated for agricultural and urban purposes, this interruptible supply will be replaced by more reliable base contractual water supply deliveries. If the new storage capacity is designated for environmental purposes, net decreases are seen in total agricultural and urban water supply benefits.

Figure 1

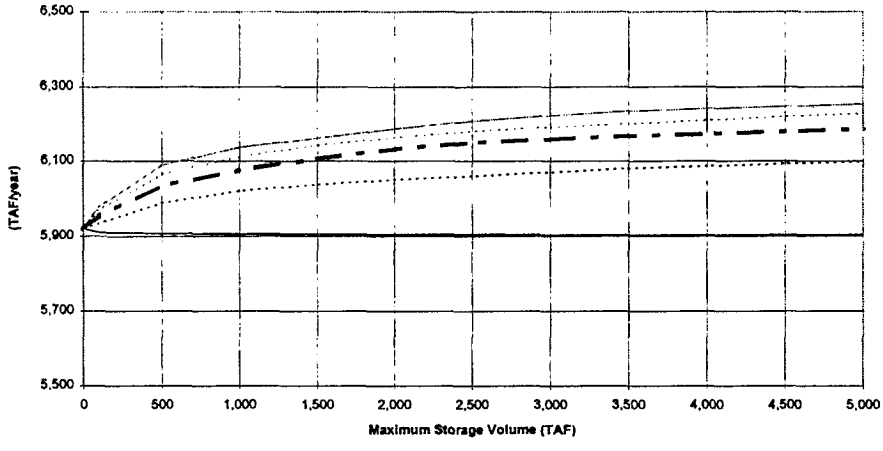
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

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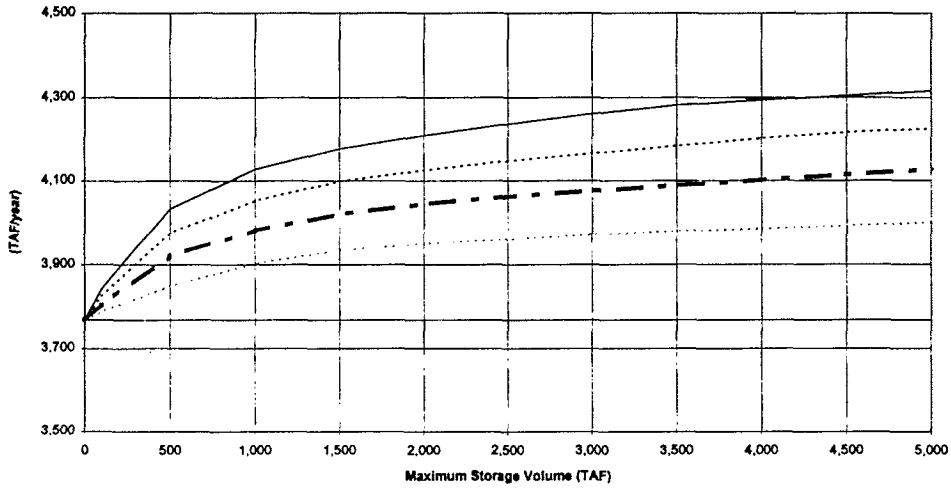
Figure 2

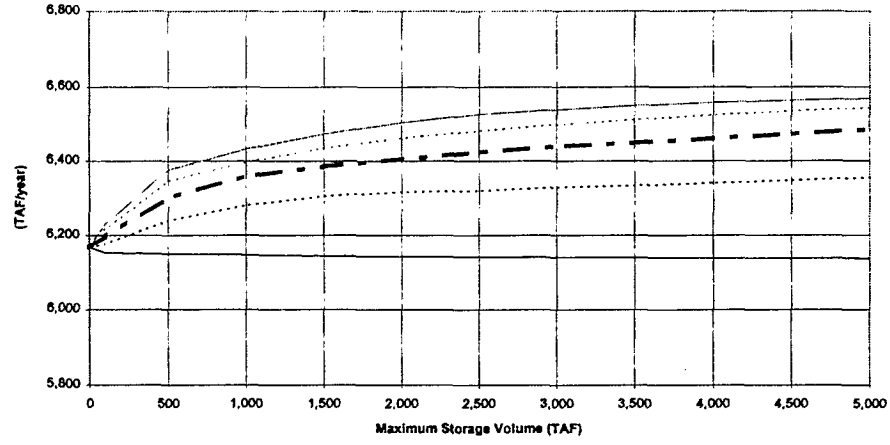
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

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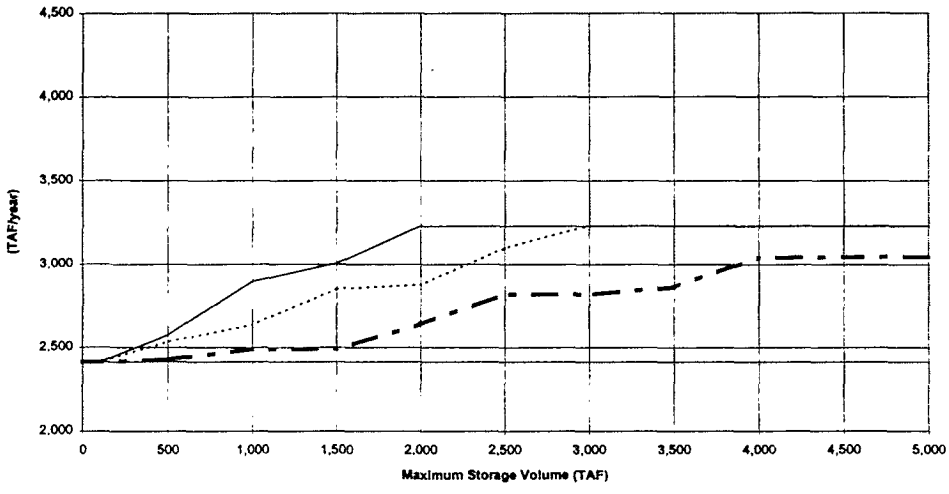
Figure 3

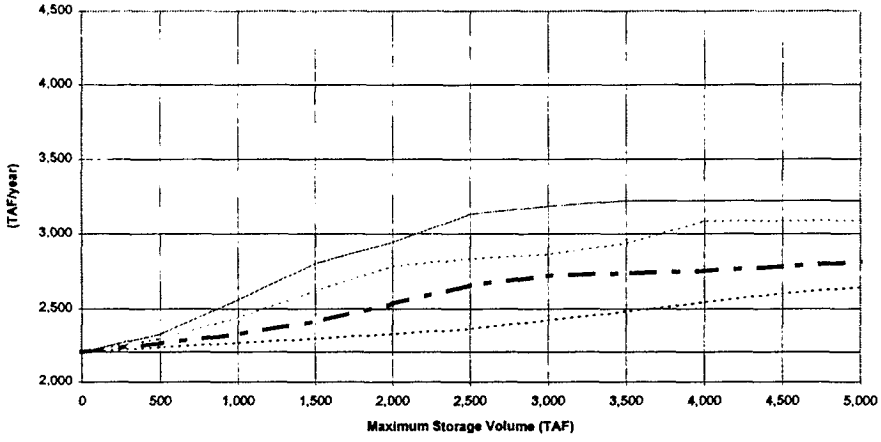
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

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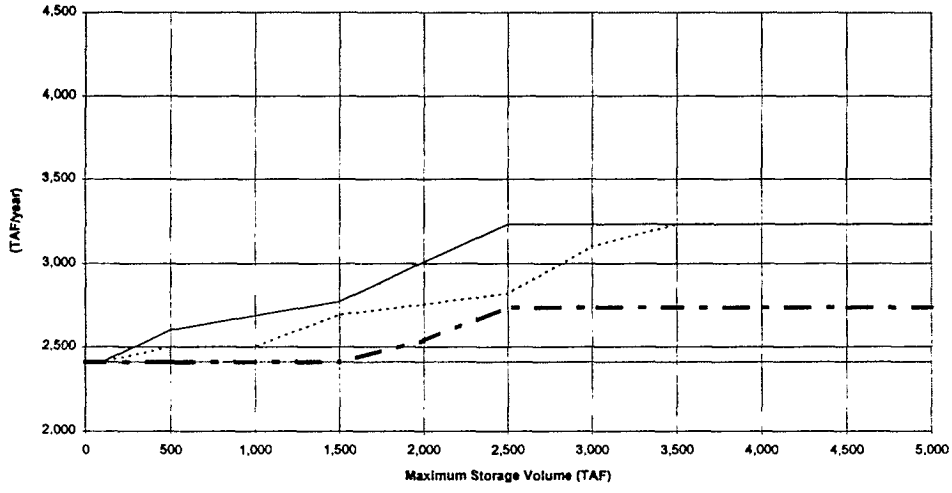
Figure 4

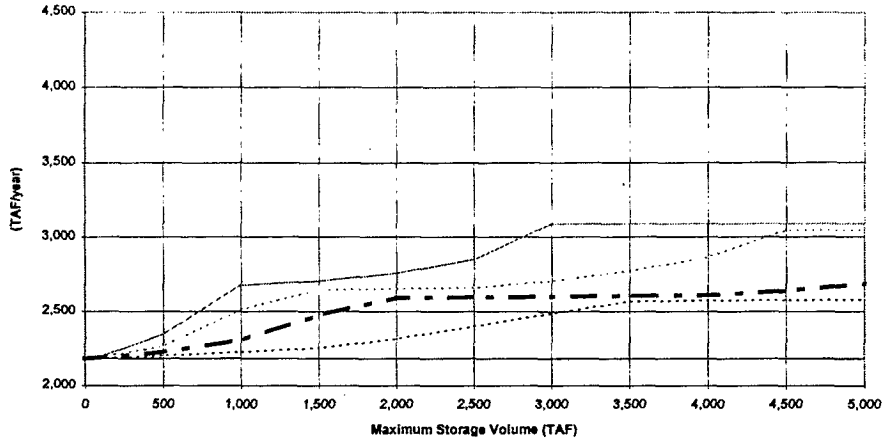
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

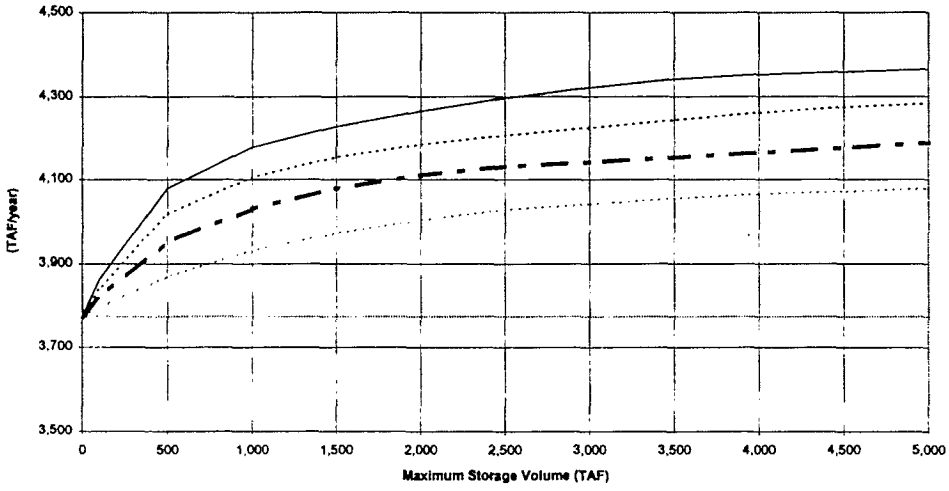
NC_RV06.XLS 2 Charts

Figure 5

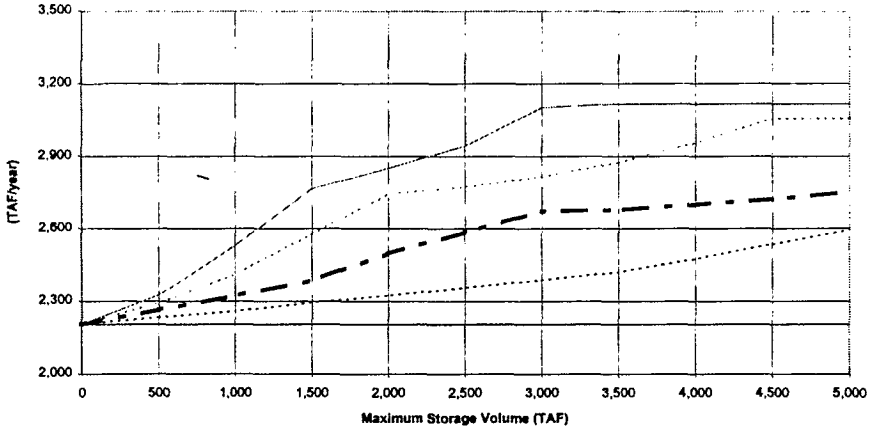
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

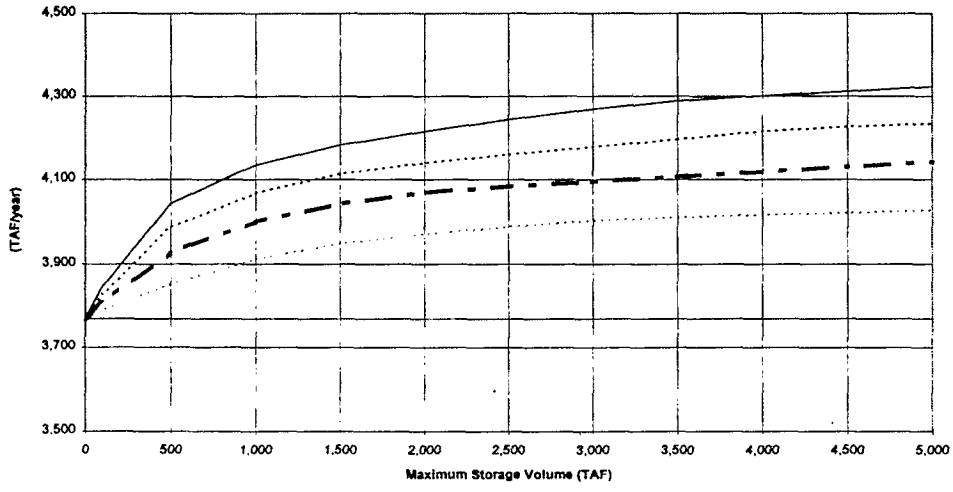
NC_RV03.XLS 2 Charts

Figure 6

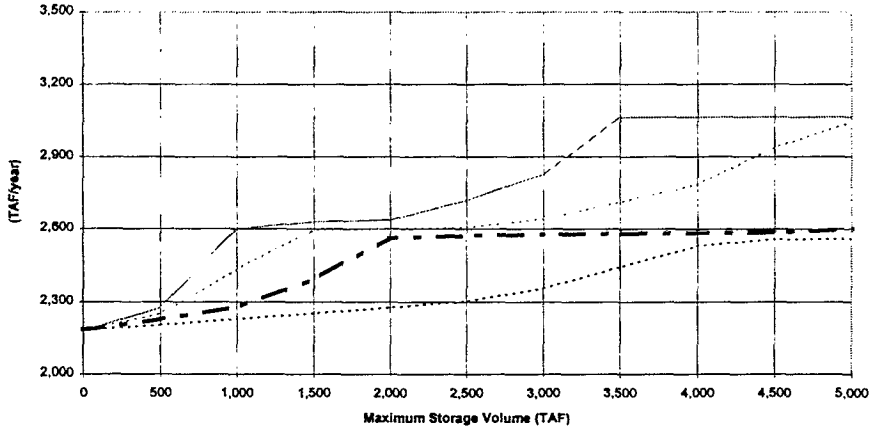
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note. 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

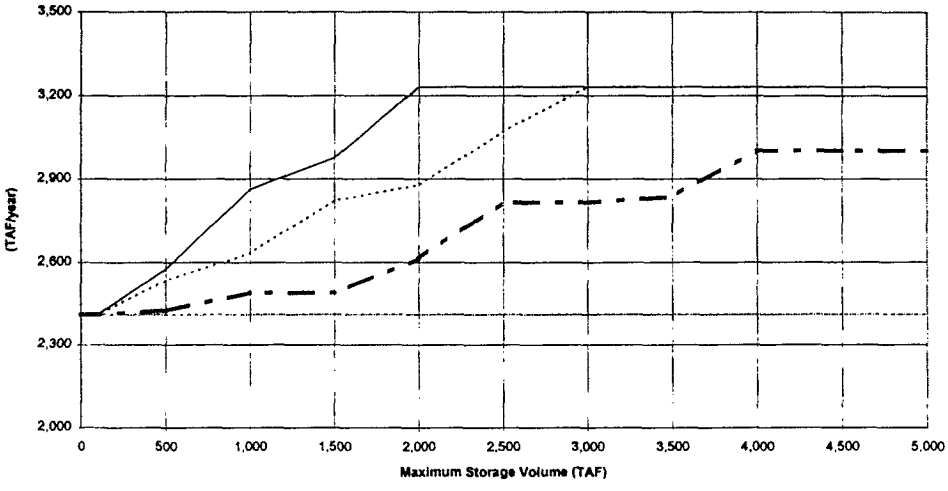
NC_RV07.XLS 2 Charts

Figure 7

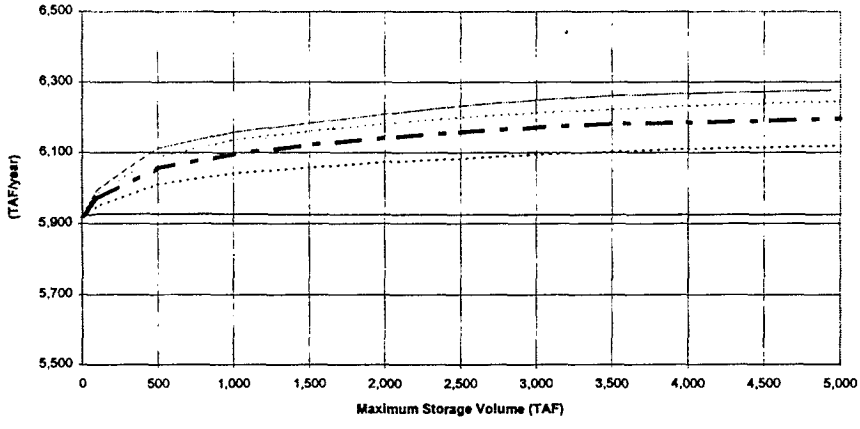
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

NC_RV04.XLS 2 Charts

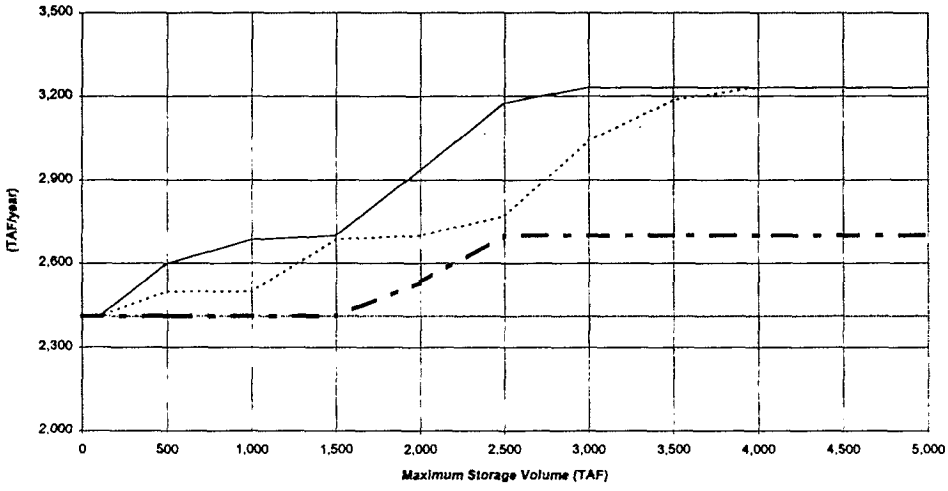
D-006583

Figure 8

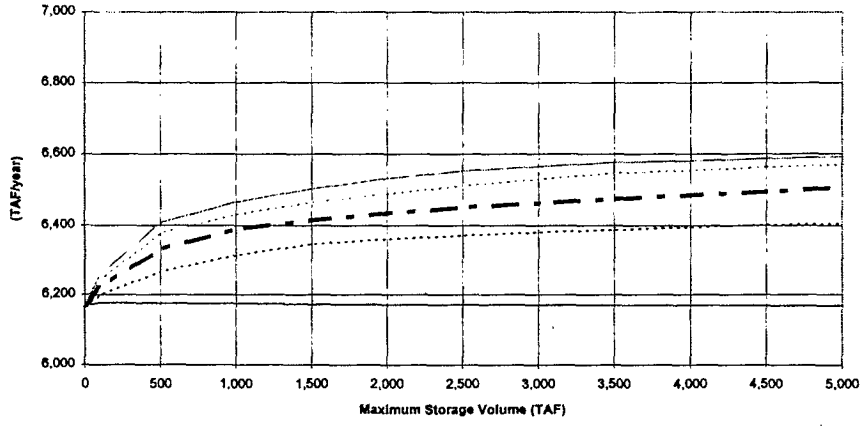
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note. 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV08.XLS 2 Charts

South of Delta Off-Aqueduct Storage

This evaluation provides initial quantitative information on combined environmental -- agricultural and urban water supply benefits that might be provided by new south of Delta storage facilities. Additional information on water quality benefits, interaction with other potential new storage and conveyance facilities, costs of new storage facilities, and environmental acceptability of new storage facilities must all be considered in a further refinement of this evaluation. Potential water supply benefits under each of the eight operation conditions were evaluated separately and described in the following section of this report. Some general observations drawn from this study are summarized here. More detailed results are described in the following sections of this report.

1. Adding any new storage facilities has significant impacts on agricultural and urban water supply benefits due to reductions in delivery of SWP Interruptible Supply water. Under the terms of the Monterey Agreement, whenever project water is available for delivery to SWP contractors that is not needed for fulfilling approved entitlement water deliveries or for meeting SWP operational commitments, including storage goals for the current or following years, SWP contractors may take delivery of these water supplies in proportion to their respective annual Table A entitlement. For the purposes of this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP Table A entitlement water. Adding new storage capacity -- for either environmental or agricultural and urban water supply purposes -- will reduce the availability of unallocated surplus Delta water and thereby reduce the quantity of SWP Interruptible Supply deliveries. If the new storage capacity is designated for agricultural and urban purposes, this interruptible supply will be replaced by more reliable base contractual water supply deliveries. If the new storage capacity is designated for environmental purposes, net decreases are seen in total agricultural and urban water supply benefits.

   This effect is pronounced under the expanded Banks Pumping Plant capacity condition, due to the higher level of SWP Interruptible Supply deliveries that would occur without new storage facilities. An example of this effect is seen in model runs with a 3.0 maf maximum storage capacity and Normal Period Supply Operation goals for both environmental water supply and agricultural and urban water supply. Under these conditions and the facilities allocation factor set at 0 percent, a net loss of 83 taf occurs in 71-Year Average Annual Agricultural and Urban Water Supply benefits. With the facilities allocation factor raised to 25 percent, this loss is recovered and a net gain of 24 taf is attained in 71-Year Average Annual Agricultural and Urban Water Supply benefits.

2. Potential benefits for both environmental water supply and agricultural and urban water supply from south of Delta off-aqueduct storage are significantly enhanced with expanded Banks Pumping Plant capacity under any combination of operational goals and storage capacities. Consider as an example a 2.0 maf maximum storage capacity facility, a facilities allocation factor of 50 percent, and Normal Period Supply goals for both environmental storage and agricultural and urban storage. Under these conditions and with existing Banks

Pumping Plant capacity, a net increase in 71-Year Average Annual Environmental Delta Outflow of 78 taf and a net decrease in 71-Year Average Annual Agricultural and Urban Water Supply of 13 taf occur. Under the same maximum storage capacity, facilities allocation factor, and operational goals, with expanded Banks Pumping Plant capacity, net increases in 71-Year Average Annual Environmental Delta Outflow of 156 taf and 71-Year Average Annual Agricultural and Urban Water Supply of 108 taf are attained. Similar improvements in benefits are attained with expanded Banks Pumping Plant capacity under other combinations of operational goals.

3. With both environmental storage and agricultural and urban storage operated for Normal Period Supply goals, cumulative benefits (as measured by 71-Year Average Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply) continue to increase as maximum storage capacity increases. Although incremental benefits decrease towards the upper end of the range of maximum storage capacities evaluated, under this type of operation there is no obvious limit to effective storage capacity below 3.0 maf. For any given maximum storage capacity, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity and a 2.0 maf maximum storage capacity, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 270, 218, 156, 84, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -80, 29, 108, 188, and 270 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, it is clear that deliveries from storage to either type of use increase in a fairly linear relationship with the share of storage dedicated to that type of use.

   As displayed in Figure 9, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 174 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 116 taf are achieved.

4. With both environmental storage and agricultural and urban storage operated for Dry Period Supply goals, only minor combined benefits (as measured by Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply) are possible with existing Banks Pumping Plant capacity. With expanded Banks Pumping Plant capacity, combined benefits are more significant, but disproportionate to maximum storage capacity and facilities allocation factor. The maximum potential Minimum Annual Environmental Delta Outflow decreases dramatically as the facilities allocation factor is increased from 25 to 50 percent. No benefits to Minimum Annual Environmental Delta Outflow are achieved with a facilities allocation factor of 75 percent. Compared to Minimum Annual Environmental Delta Outflow, Minimum Annual Agricultural and Urban Water Supply Benefits increase more linearly with maximum storage capacity. Incremental benefits

increase throughout the range of maximum storage capacities evaluated for facilities allocation factors of 25 through 100 percent. However, as with Minimum Annual Environmental Delta Outflow, benefits decrease dramatically as the facilities allocation factor is decreased from 50 to 25 percent.

Under combined Dry Period Supply Operations, expanded Banks Pumping Plant capacity, and a facilities allocation factor of 0 percent, Minimum Annual Environmental Delta Outflow reaches a maximum with a maximum storage capacity of 1.0 maf. With facilities allocation factors of 75 and 100 percent, Minimum Annual Agricultural and Urban Water Supply Benefits reach a near-maximum with storage capacities of 1.5 and 2.0 maf, respectively. Increases in both Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply are achieved only with facilities allocation factors of 25 and 50 percent. With these facilities allocation factors, combined Minimum Annual benefits increase throughout the range of maximum storage capacities evaluated. As shown in Figure 10, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and facilities allocation factors of 25 or 50 percent. With a 25 percent facilities allocation factor, a net increase to Minimum Annual Environmental Delta Outflow of 308 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 169 taf are achieved. With a 50 percent facilities allocation factor, a net increase to Minimum Annual Environmental Delta Outflow of 77 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 397 taf are achieved.

5. With environmental storage operated for Normal Period Supply and agricultural and urban storage operated for Dry Period Supply, only minor combined water supply benefits are possible with existing Banks Pumping Plant capacity. With facilities allocation factors of 25 through 75 percent, near-maximum combined benefits to 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply are attained with a maximum storage capacity of 1.0 maf. With expanded Banks Pumping Plant capacity, combined benefits to 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply increase throughout the range of maximum storage capacities evaluated. As displayed in Figure 11, with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 188 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 354 taf are attained.

6. With environmental storage operated for Dry Period Supply and agricultural and urban storage operated for Normal Period Supply, no significant combined water supply benefits are attained with existing Banks Pumping Plant capacity. With expanded Banks Pumping Plant capacity, maximum increases to Minimum Annual Environmental Delta Outflow are achieved with a maximum storage capacity of 1.25 maf for facilities allocation factors of 25 and 50 percent. Benefits are reduced significantly as the facilities allocation factor is increased from 25 to 50 percent. No increases to Minimum Annual Environmental Delta Outflow are attained with a facilities allocation factor of 75 percent. 71-Year Average Annual Agricultural and Urban Water Supply increases throughout the range of maximum

storage capacities evaluated for facilities allocation factors of 25 to 75 percent. As shown in Figure 12, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 289 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 120 taf are achieved.

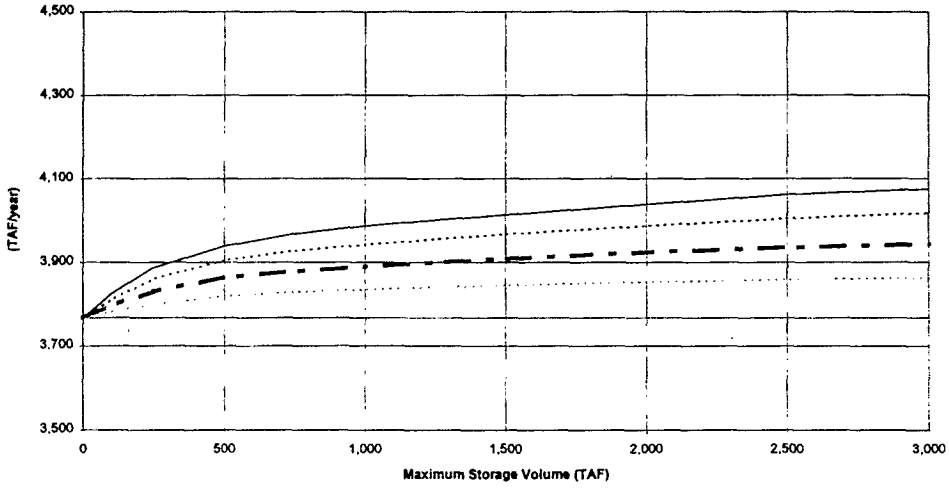
D-006588

Figure 9

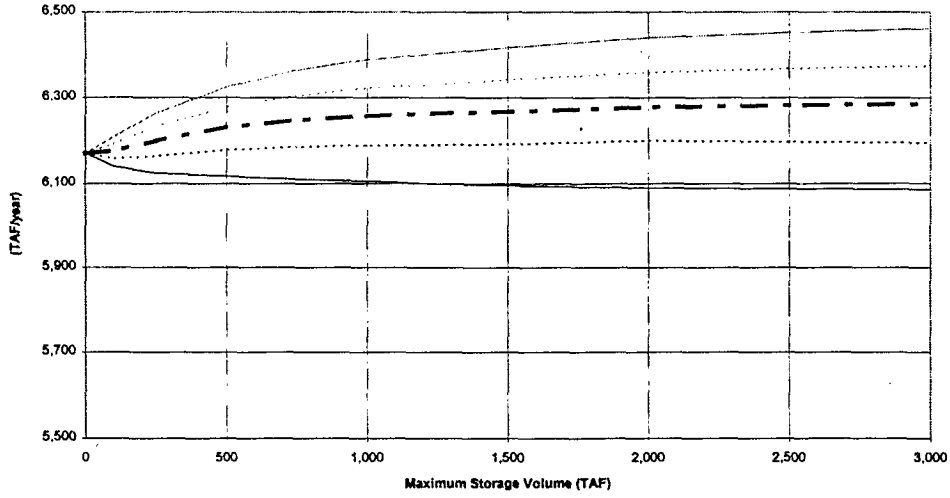
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

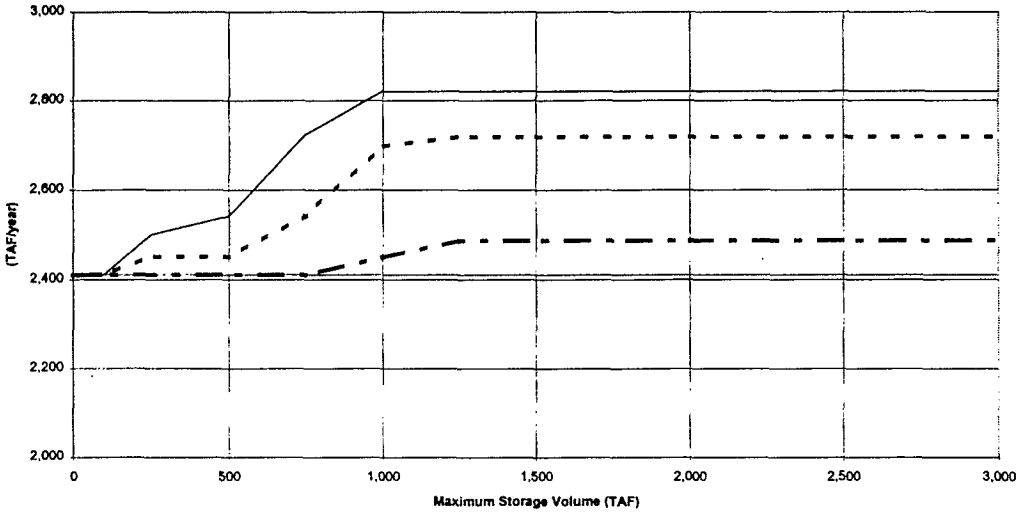
SC_RV5.XLS 2 Charts

Figure 10

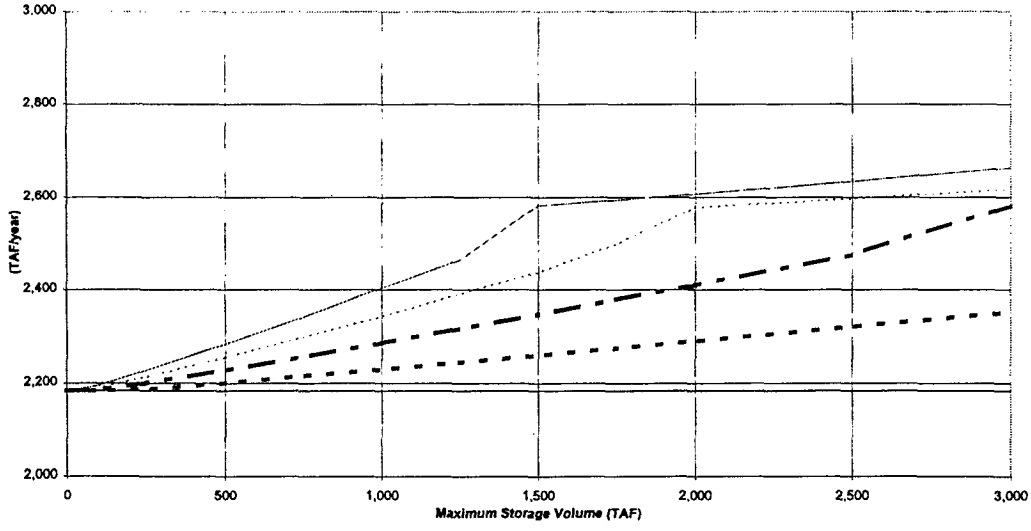
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

SC_RV6.XLS 2 Charts

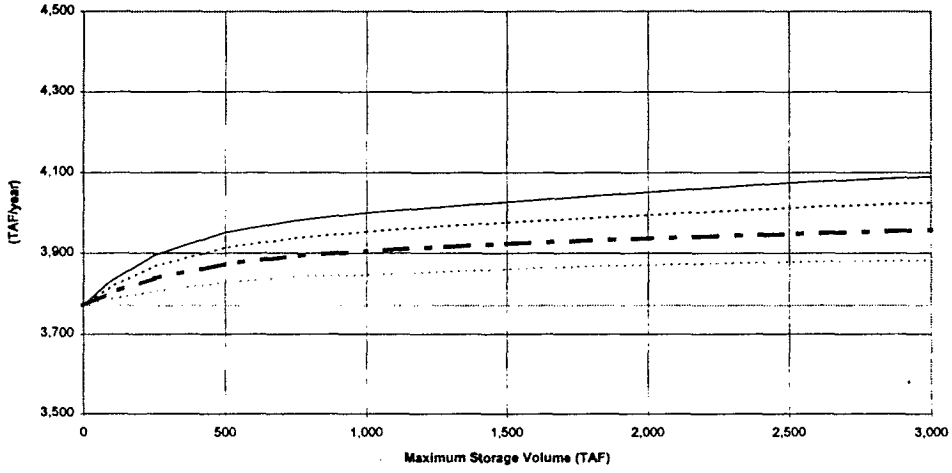
D-006590

Figure 11

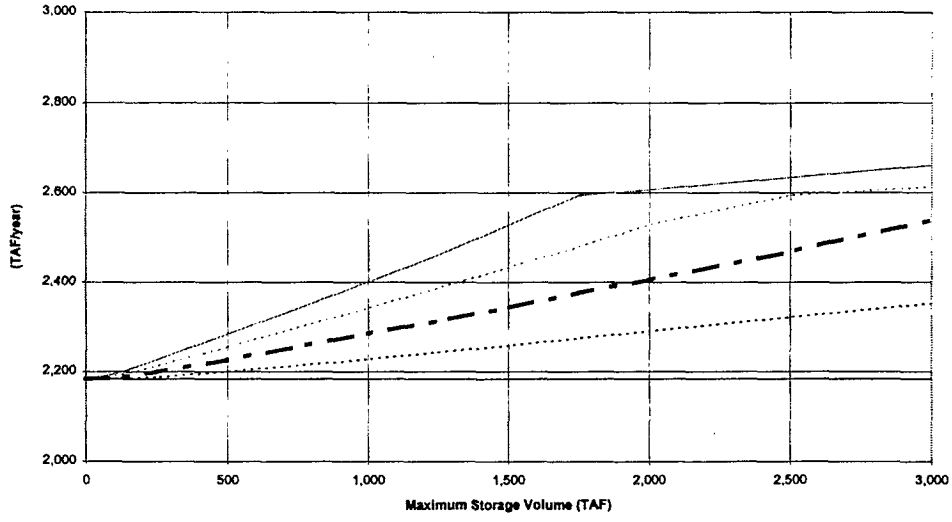
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

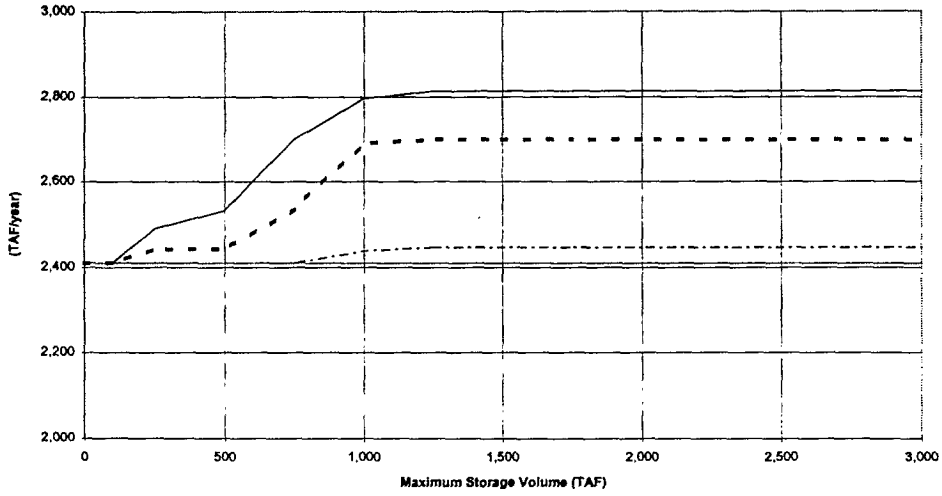
SC_RV7.XLS 2 Charts

Figure 12

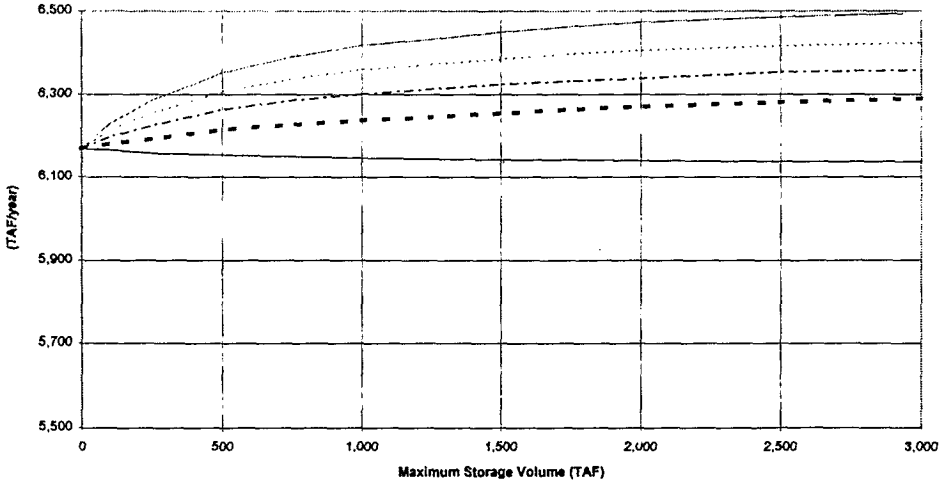
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

SC_RV8.XLS 2 Charts

UPSTREAM OF DELTA

D—006593

D-006593

Initial Sensitivity Evaluation of Operational Parameters and Storage Volumes Using the CALFED Post-Processing Operations Model

Upstream of Delta Off-Stream Storage Facilities

COMBINED ENVIRONMENTAL -- AGRICULTURAL AND URBAN WATER SUPPLY EVALUATION

Introduction

Environmental water supply benefits from new upstream of Delta storage facilities would be achieved by diverting water from the Sacramento River during periods of high flow and concurrent low environmental impacts. This stored water would then be released back to the Sacramento River to meet Delta outflow and/or in-stream targets. Agricultural and Urban water supply benefits from new upstream of Delta storage facilities would be achieved in a similar manner. As described above, water from the Sacramento River would be diverted during periods of high flow and concurrent low environmental impacts. This stored water would be released back to the Sacramento River during times of need. The capacity of the new storage facility, rules governing diversions into storage, and operational goals (e.g. maximum normal period supply or maximum dry period supply) all affect the magnitude of potential water supply benefits for environmental or agricultural and urban purposes.

The CALFED spreadsheet operations model was used to evaluate effects of various operational rules and physical capacities of new upstream of Delta storage facilities on potential combined environmental -- agricultural and urban water supply benefits. In preceding studies, separate evaluations were conducted to identify potential benefits from upstream of Delta storage facilities dedicated to environmental water supply and agricultural and urban water supply. In each of these evaluations, eight sets of parameters were developed which collectively bracket ranges of potential operations. These eight operations conditions include two operational goals implemented under four external conditions.

The first operational goal modeled is to maximize supplies over normal hydrologic periods. This goal is achieved by imposing no storage carryover requirement and releasing water from storage whenever unmet demand exists. A by-product of this type of operation is that supplies in storage are often depleted when entering critically dry periods. The second operational goal is to maximize supplies in the driest years of normal hydrologic sequences. This goal is achieved by reducing the amount of water delivered from storage in any given year through methods such as imposing carryover requirements. While this type of operation usually results in relatively larger quantities of water in storage for use during extended dry periods, overall long-term water deliveries are diminished.

Input from agency representatives and stakeholders suggested a need to maintain certain geomorphological processes along the upper un-leveed portion of the Sacramento River and biological processes in the river and Bay-Delta system as a condition to operating any new

storage facilities. Under this scenario, a minimum peak flow would be required to occur in the river each year or defined number of years before flows would be diverted to storage. In this evaluation, a combination of one-month and two-month volumes are used to represent this minimum flow event target. In addition, for this evaluation the Sacramento River flow event target is implemented annually. Beginning each October the flow target (in addition to existing in-stream and/or navigation requirements) must be met prior to diverting any flows to storage. Once the target is met, only existing in-stream and/or navigation requirements must be met prior to diverting subsequent flows to storage during the water year. An initial sensitivity evaluation indicates the Sacramento River flow event target has negligible effects on storage operations below a flow event target measured by a one-month volume of 500 taf. Between flow event targets measured by one-month volumes of 500 and 1,000 taf, storage operations are sensitive to the target level. Minimal additional effects are seen with targets measured by one-month volumes above 1,000 taf up to the maximum flow event target evaluated, measured by a one-month volume of 1,500 taf. For this evaluation, the Sacramento River flow event target is considered an external condition to be applied in conjunction with existing or expanded Banks Pumping Plant capacity. To bracket the potential effects in storage operations, low and high Sacramento River flow event targets were selected for evaluation.

Because the capacity of Banks Pumping Plant, the State Water Project Delta pumping facility has an affect on potential storage operations for meeting south of Delta unmet agriculture and urban demands, two capacities were considered in this evaluation. In combination, the two Banks Pumping Plant capacities and two Sacramento River flow event targets result in four external conditions to be considered in this evaluation. Under the first external condition, existing Banks Pumping Plant capacity is assumed in conjunction with a low Sacramento River flow event target. Under the second external condition, an expanded Banks Pumping Plant capacity, as proposed in the Department of Water Resources South Delta Improvements Plan, is assumed in conjunction with a low Sacramento River flow event target. Under the third external condition, existing Banks Pumping Plant capacity is assumed in conjunction with a high Sacramento River flow event target. Under the fourth external condition, an expanded Banks Pumping Plant capacity is assumed in conjunction with a high Sacramento River flow event target.

Because either environmental or agriculture and urban storage could be operated for either Normal Period Supply of Dry Period Supply, a total of sixteen operation conditions were evaluated in this study. These sixteen operation conditions, defined by the two operational goals for each water supply type under these four external conditions, are described in Table NC-1.

In this evaluation, a facilities allocation factor was used to direct the portion of storage volume and storage inflow/outflow conveyance capacity dedicated to environmental water supply and agricultural and urban water supply purposes. This facilities allocation factor was defined such that 0 percent indicates that all facilities are dedicated to environmental purposes while 100 percent indicates that all facilities are dedicated to agricultural and urban water supply purposes. Any factor ranging from 0 to 100 percent may be input into the model. Under the assumptions built into the model, the storage volume for either purpose (total volume multiplied by the appropriate facilities allocation factor) always remains dedicated to that purpose alone.

On the other hand, the storage inflow/outflow conveyance capacity for either purpose is only dedicated as a first priority to that purpose. If storage conveyance capacity dedicated to either environmental or agricultural and urban purposes is not in use, it may be employed for the other purpose. To evaluate combined environmental -- agricultural and urban water supply operations, the parameter sets for the sixteen operation conditions described in Table NC-1 were employed to estimate water supply benefits under facilities allocation factors of 0, 25, 50, 75, and 100 percent and maximum storage volumes ranging from 100 taf to 5.0 maf.

As described in previous evaluations, a minimum Delta outflow target of 12,000 cfs for the months of January through June is used as a surrogate for environmental water demands for these evaluations. Because the CALFED spreadsheet operations model uses a monthly time step, more detailed evaluation of flows is not possible with this tool. However, in actual operation, the volume of water released from storage towards the 12,000 cfs target might be used to create higher pulses of flow for shorter durations, if this operation was deemed more environmentally beneficial.

Using this target minimum Delta outflow surrogate approach, environmental water supply benefits are measured in this evaluation by averaging monthly flow rates up to a maximum of 12,000 cfs for January through June of each water year. Any flow above 12,000 cfs is not counted as part of the environmental water supply benefits. Note that the result of this computation is significantly lower than and not comparable to *total* average annual Delta outflow. For simplicity in this evaluation, this average of January through June Delta outflows up to 12,000 cfs is termed *Environmental Delta Outflow*.

As also described in previous evaluations, south of Delta SWP and CVP demands are used as a surrogate for agricultural and urban water supply demands in these evaluations. In actual practice, agricultural and urban water supply benefits from upstream of Delta storage might be designated to a subset of SWP and CVP users, or other upstream of Delta or south of Delta agricultural and urban water users.

Five statistical measures of water supply benefits for either environmental purposes or agricultural and urban purposes are included in this analysis, as described in Table NC-2. Water supply benefits, as described by these five statistical measures, were estimated for each of the sixteen sets of operation conditions over the range of maximum storage volumes and facilities allocation factors. While this information should not be considered definitive, this evaluation illustrates the potential for combined environmental -- agricultural and urban water supply benefits from upstream of Delta storage facilities and the effects of various external conditions and operational goals. The information developed in this evaluation may be used to provide an initial refinement of the range of storage volumes of potential upstream of Delta storage facilities which should be considered in future studies.

Table NC-1
Bracketing Operational Conditions

Condition	Description
1	Existing Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agriculture and Urban Storage: Normal Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.
2	Existing Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agriculture and Urban Storage: Dry Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
3	Existing Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental storage is operated to provide maximum supplies over normal hydrologic periods. Agricultural and urban storage is operated to provide maximum supplies in critically dry years.
4	Existing Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental storage is operated to provide maximum supplies in critically dry years. Agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

D-006597

Table NC-1 (Continued)
Bracketing Operational Conditions

Condition	Description
5	Expanded Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agriculture and Urban Storage: Normal Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.
6	Expanded Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agriculture and Urban Storage: Dry Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
7	Expanded Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental storage is operated to provide maximum supplies over normal hydrologic periods. Agricultural and urban storage is operated to provide maximum supplies in critically dry years.
8	Expanded Banks PP Capacity/Low S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a low Sacramento River flow event target. Environmental storage is operated to provide maximum supplies in critically dry years. Agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

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Table NC-1 (Continued)
Bracketing Operational Conditions

Condition	Description
9	Existing Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agriculture and Urban Storage: Normal Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.
10	Existing Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agriculture and Urban Storage: Dry Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
11	Existing Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental storage is operated to provide maximum supplies over normal hydrologic periods. Agricultural and urban storage is operated to provide maximum supplies in critically dry years.
12	Existing Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation. This condition assumes existing Banks Pumping Plant capacity is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental storage is operated to provide maximum supplies in critically dry years. Agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

Table NC-1 (Continued)
Bracketing Operational Conditions

Condition	Description
13	Expanded Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agriculture and Urban Storage: Normal Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.
14	Expanded Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agriculture and Urban Storage: Dry Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
15	Expanded Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental storage is operated to provide maximum supplies over normal hydrologic periods. Agricultural and urban storage is operated to provide maximum supplies in critically dry years.
16	Expanded Banks PP Capacity/High S.R. Flow Event Target Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation. This condition assumes increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan is in operation and diversions to upstream of Delta storage are limited by a high Sacramento River flow event target. Environmental storage is operated to provide maximum supplies in critically dry years. Agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

Table NC-2
Statistical Measures
of
Environmental and Agricultural and Urban Water Supply Benefits

Measure	Description
1	71-Year Average Annual. Annual average over the historical hydrologic sequence used in the model simulations.
2	1928-34 Critical Dry Period Average Annual. Annual average over the seven year critical dry period.
3	Average Dry Year. Annual average over the sixteen water years classified as dry years within the 71-year hydrologic sequence.
4	Average Critically Dry Year. Annual average over the eleven water years classified as critically dry years within the 71-year hydrologic sequence.
5	Minimum Annual. The minimum annual quantity that occurs over the 71-year hydrologic sequence.

Summary

This evaluation provides initial quantitative information on combined environmental -- agricultural and urban water supply benefits that might be provided by new upstream of Delta storage facilities. Additional information on water quality benefits, interaction between environmental water supply and agricultural and urban water supply opportunities, interactions with other potential new storage and conveyance facilities, costs of new storage facilities, and environmental acceptability of new storage facilities must all be considered in a further refinement of upstream of Delta water storage facilities. Potential water supply benefits under each of the sixteen operation conditions were evaluated separately. Some general observations drawn from this study are summarized here. More detailed results are described in the following sections of this report.

1. With both environmental storage and agricultural and urban storage operated for Normal Period Supply goals, cumulative benefits (as measured by 71-Year Average Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply) continue to increase as maximum storage volume increases. Although incremental benefits decrease towards the upper end of the range of maximum storage volumes evaluated, under this type of operation there is no obvious limit to effective storage volume below 5.0 maf. For any given maximum storage volume, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 441, 357, 278, 183, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -26, 146, 236, 291, and 333 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, 71-Year average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

   As displayed in Figure NC-1, near maximum combined benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 398 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 266 taf are achieved. In comparison, maximum combined benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are similar in magnitude but shifted slightly towards agricultural and urban water supply. As shown in Figure NC-2, with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 359 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 314 taf are achieved.

2. With both environmental storage and agricultural and urban storage operated for Dry Period Supply goals, cumulative benefits (as measured by Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply) continue to increase as maximum storage volume increases up to about 4.0 maf. The maximum potential Minimum Annual Environmental Delta Outflow decreases dramatically as the facilities allocation factor is increased from 25 to 50 percent. No benefits to Minimum Annual Environmental Delta Outflow are achieved with a facilities allocation factor of 75 percent. Compared to Minimum Annual Environmental Delta Outflow, Minimum Annual Agricultural and Urban Water Supply Benefits increase more linearly with maximum storage volume. Incremental benefits increase throughout the range of maximum storage volumes evaluated for facilities allocation factors of 25 through 100 percent. However, benefits decrease dramatically as the facilities allocation factor is decreased from 100 to 75 percent between 2.0 and 4.0 maf maximum storage volume. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a facilities allocation factor of 0 percent, Minimum Annual Environmental Delta Outflow reaches a maximum with a maximum storage volume of 2.5 maf. With facilities allocation factors of 100 percent, Minimum Annual Agricultural and Urban Water Supply Benefits reaches a maximum with a storage volumes of 3.0 maf. Relative increases in both Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits with greater storage volumes are achieved only with facilities allocation factors of 25 and 50 percent. With these facilities allocation factors, combined Minimum Annual benefits increase throughout the range of maximum storage volumes evaluated.

   As displayed in Figure NC-3, near maximum combined benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 636 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 600 taf are achieved. In comparison, Figure NC-4 displays reduced maximum combined benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target, a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 326 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 502 taf are achieved.

3. With environmental storage operated for Normal Period Supply and agricultural and urban storage operated for Dry Period Supply, cumulative benefits for 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits continue to increase as maximum storage volume increases up to about 5.0 maf. For any given maximum storage volume, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual

Environmental Delta Outflow decreases through the range of 448, 372, 301, 203, and 0 taf and Minimum Annual Agricultural and Urban Water Supply increases through the range of 0, 94, 376, 416, and 454 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

As displayed in Figure NC-5, with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 414 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 174 taf are attained. With a facilities allocation factor of 75 percent maximum combined benefits to 71-Year Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 304 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 851 taf are achieved. Maximum combined 71-year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 509 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 118 taf are achieved. Maximum net increase to Minimum Annual Agricultural and Urban Water Supply of 912 taf is achieved with a facilities allocation factor of 100 percent, while Minimum Annual Environmental Delta Outflow is unaffected. In comparison, Figure NC-6 displays average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target. With a facilities allocation factor of 75 percent maximum combined benefits to 71-Year Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 260 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 861 taf are achieved. Maximum combined 71-year average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 467 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 85 taf are achieved. Maximum net increase to Minimum Annual Agricultural and Urban Water Supply of 881 taf are achieved with a facilities allocation factor of 100 percent, while Minimum Annual Environmental Delta Outflow is unaffected.

4. With environmental storage operated for Dry Period Supply and agricultural and urban storage operated for Normal Period Supply, cumulative benefits for 71-Year Average Annual Agricultural and Urban Water Supply Benefits and Minimum Annual Environmental Delta Outflow continue to increase as maximum storage volume increases up to about 5.0 maf. For any given maximum storage volume, relative 71-Year average annual benefits to

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environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity, low Sacramento River flow event target, and a 2.0 maf maximum storage volume, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, Minimum Annual Environmental Delta Outflow decreases through the range of 526, 289, 122, 0, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of 3, 191, 266, 320, and 363 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, average annual deliveries from storage to either type of use increase in fairly linear relationship with the share of storage dedicated to that type of use.

As displayed in Figure NC-7, with a maximum storage volume of 5.0 maf and a facilities allocation factor of 50 percent, a net increase to Minimum Annual Environmental Delta Outflow of 181 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 275 taf are attained. With a facilities allocation factor of 25 percent maximum combined benefits to Minimum Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 198 taf are achieved. Maximum combined 71-year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 75 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 142 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 324 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 375 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 3.5 maf. In comparison, Figure NC-8 displays average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target. With a facilities allocation factor of 25 percent maximum combined benefits to Minimum Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply Benefits are attained with a maximum storage volume of 5.0 maf. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 235 taf are achieved. Maximum combined 71-year average annual benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf and a facilities allocation factor of 75 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 137 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 401 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 381 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 4.0 maf.

5. Potential benefits for both environmental water supply and agricultural and urban water supply from upstream of Delta off-stream storage are reduced with high Sacramento River flow event targets under any combination of operational goals and storage capacities. For example, with a low Sacramento River flow event target, existing Banks Pumping Plant capacity, and Normal Period Supply operation for both environmental and agricultural and urban water supply, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent for 2.0 maf maximum storage volume, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 488, 398, 318, 224, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -15, 130, 211, 242, and 266 taf. With a high Sacramento River flow event target, existing Banks Pumping Plant capacity, and Normal Period Supply operation for both environmental and agricultural and urban water supply, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent for 2.0 maf maximum storage volume, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 313, 256, 194, 120, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply increases through the range of -10, 80, 136, 164, and 184 taf. Similar reductions in benefits occur with a high Sacramento River flow event target under other combinations of operational goals and with expanded Banks Pumping Plant capacity.

6. This initial evaluation indicates that new upstream of Delta storage facilities provide greater 71-Year Average Annual Agricultural and Urban Water Supply Benefits with expanded Banks Pumping Plant capacity in comparison to existing Banks Pumping Plant capacity. However, greater Minimum Annual Agricultural and Urban Water Supply Benefits are provided with existing Banks Pumping Plant capacity in comparison to expanded Banks Pumping Plant capacity. This is because the limited Banks Pumping Plant capacity results in a constraint which limits storage releases, so more water is retained for delivery through extended dry periods. For example, consider a 2.0 maf maximum storage volume facility, existing Banks Pumping Plant capacity with a low Sacramento River flow event target, a facilities allocation factor of 50 percent, and a Normal Period Supply operation goals for both environmental storage and agricultural and urban storage. Under these conditions, a net increase in 71-Year Average Annual Environmental Delta Outflow of 318 taf and a net increase in 71-Year Average Annual Agricultural and Urban Water Supply of 211 taf occur. Under the same maximum storage volume, facilities allocation factor, and operational goals, with expanded Banks Pumping Plant capacity and a low Sacramento River flow event target, a net increase in 71-Year Average Annual Environmental Delta Outflow of 278 taf and a net increase in 71-Year Average Annual Agricultural and Urban Water Supply of 236 taf are attained. Similar effects in benefits occur with expanded Banks Pumping Plant capacity under other combinations of operational goals and with a high Sacramento River flow event target.

   Maximum combined 71-Year average annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 5.0 maf, a facilities allocation factor of 75 percent, and Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for

agricultural and urban water supply. A net increase to 71-Year Average Annual Environmental Delta Outflow of 142 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 324 taf are achieved. Maximum combined minimum annual benefits with existing Banks Pumping Plant capacity and low Sacramento River flow event target are attained with a maximum storage volume of 3.5 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 821 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 375 taf are achieved. In comparison, reduced 71-Year environmental water supply and increased 71-Year average annual agricultural and urban water supply benefits with expanded Banks Pumping Plant capacity and low Sacramento River flow event target, a maximum storage volume of 5.0 maf, a facilities allocation factor of 75 percent, and Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agricultural and urban water supply. A net increase to 71-Year Average Annual Environmental Delta Outflow of 137 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 401 taf are achieved. Similarly, a net increase to Minimum Annual Environmental Delta Outflow of 775 taf and net increase to Minimum Annual Agricultural and Urban Water Supply of 275 taf are achieved with a facilities allocation factor of 25 percent and a maximum storage volume of 3.5 maf indicate reduced minimum annual environmental and agricultural and urban water supply.

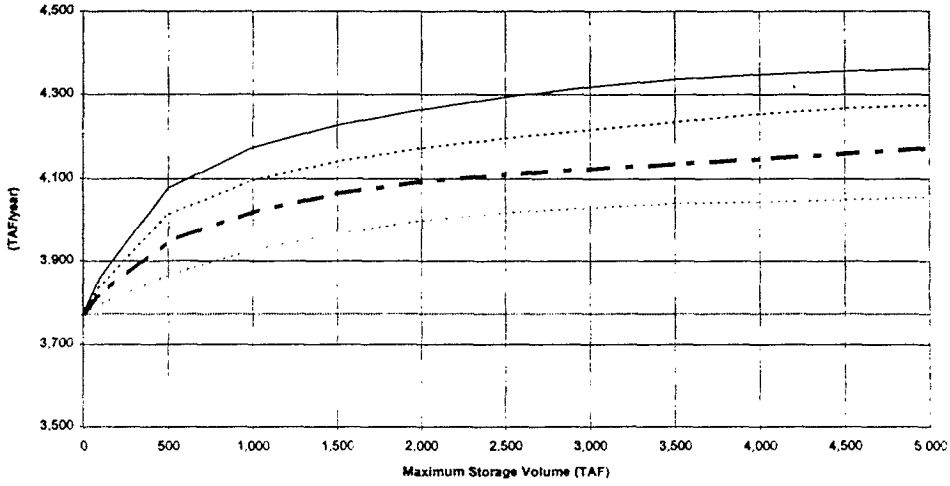
7. Adding any new storage facilities effects agricultural and urban water supply benefits due to reductions in delivery of SWP Interruptible Supply water. Under terms of the Monterrey Agreement, whenever project water is available for delivery to SWP contractors that is not needed for fulfilling approved entitlement water deliveries or for meeting SWP operational commitments, including storage goals for the current or following years, SWP contractors may take delivery of these water supplies in proportion to their respective annual Table A entitlement. For the purposes of this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP table A entitlement water. Adding new storage capacity -- for either environmental or agricultural and urban water supply purposes -- will reduce the availability of unallocated surplus Delta water and thereby reduce the quantity of SWP Interruptible Supply deliveries. If the new storage capacity is designated for agricultural and urban purposes, this interruptible supply will be replaced by more reliable base contractual water supply deliveries. If the new storage capacity is designated for environmental purposes, net decreases are seen in total agricultural and urban water supply benefits.

Figure NC-1

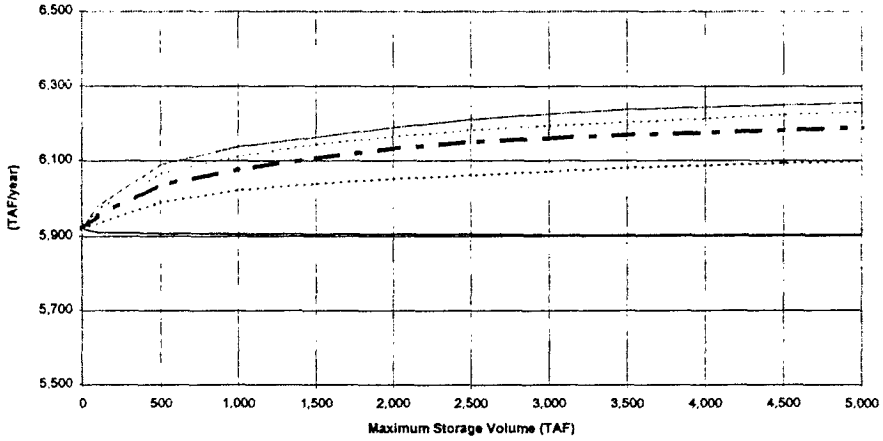
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note *0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply*
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

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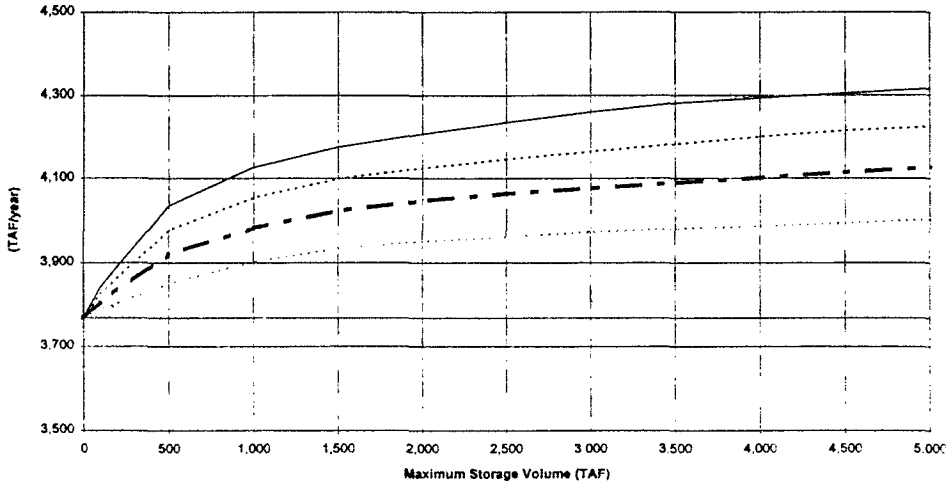
Figure NC-2

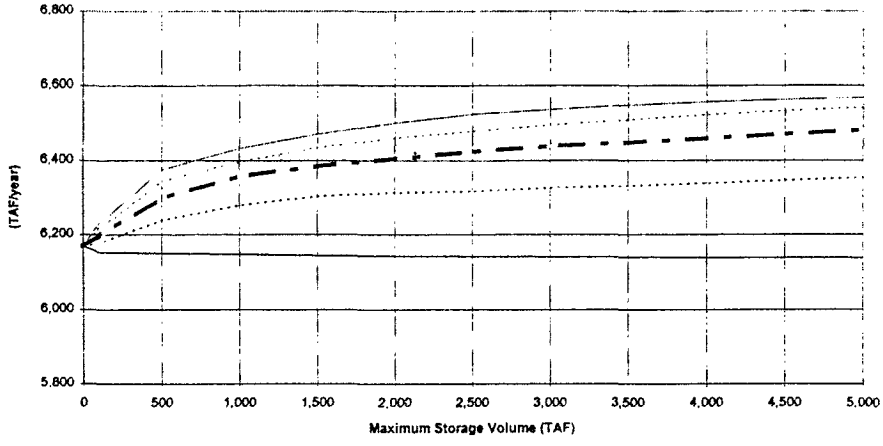
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

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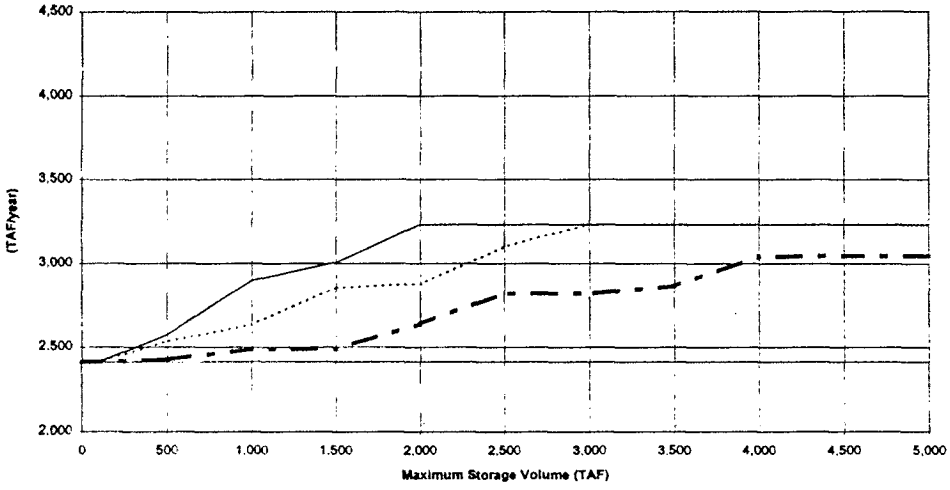
Figure NC-3

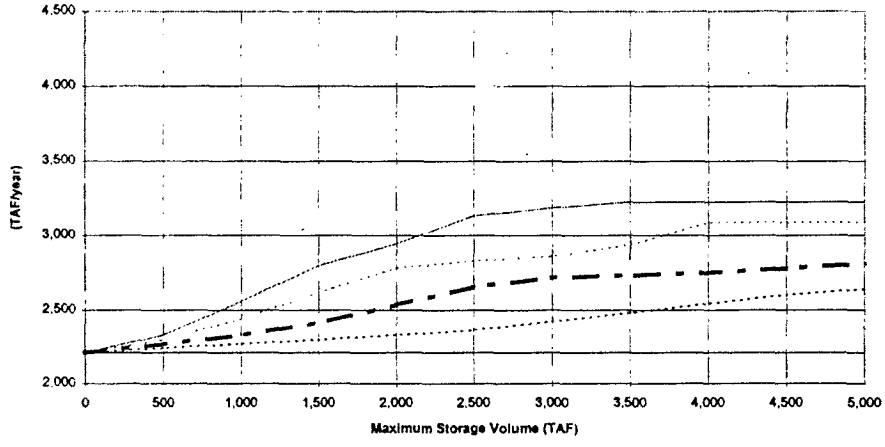
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. *Minimum Annual*
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

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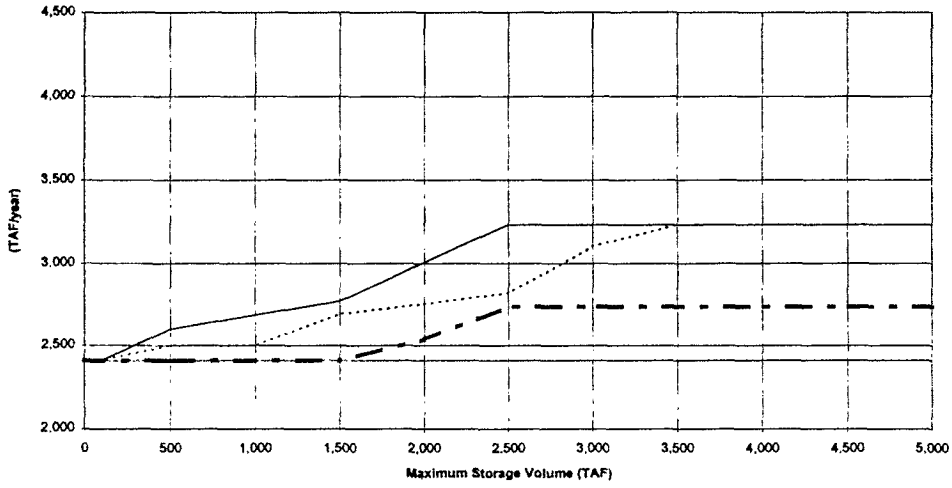
Figure NC-4

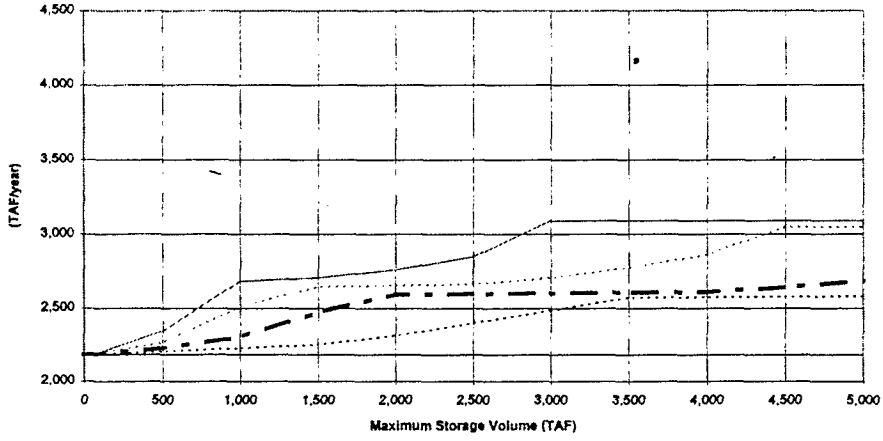
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

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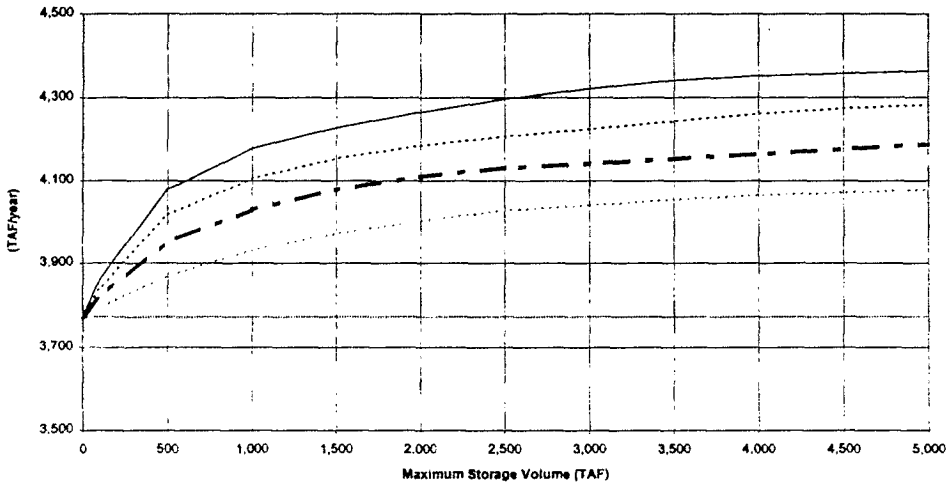
Figure NC-5

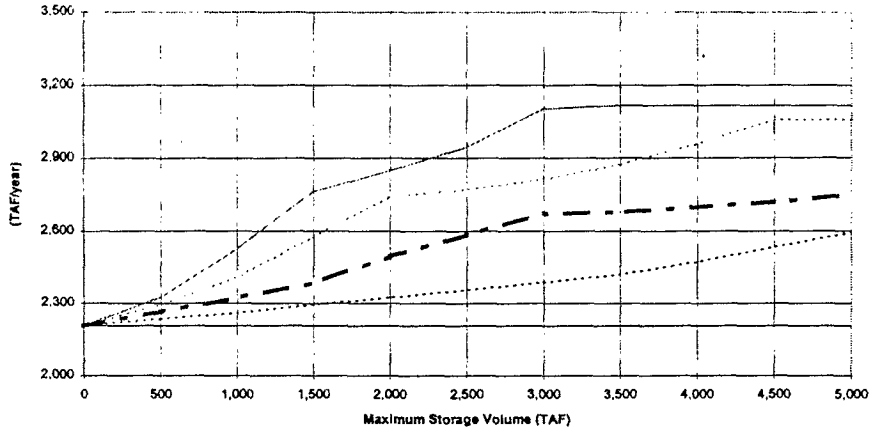
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor.

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV03.XLS 2 Charts

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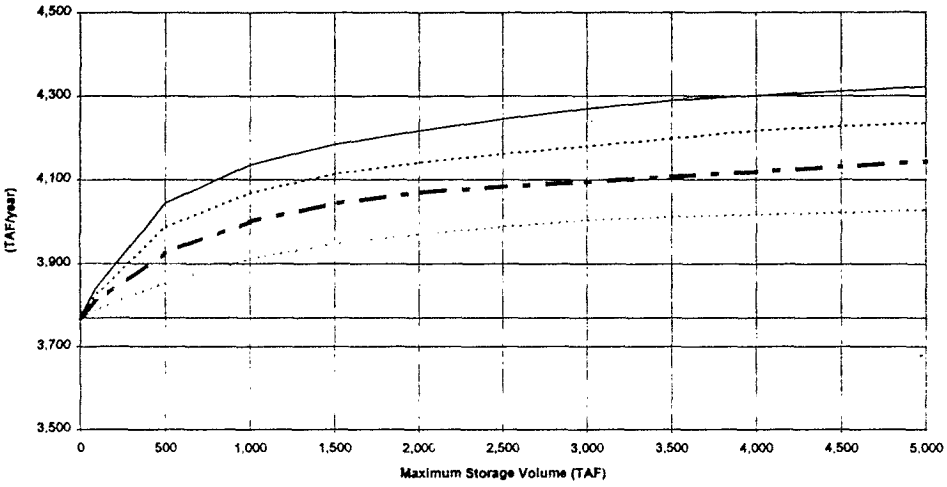
Figure NC-6

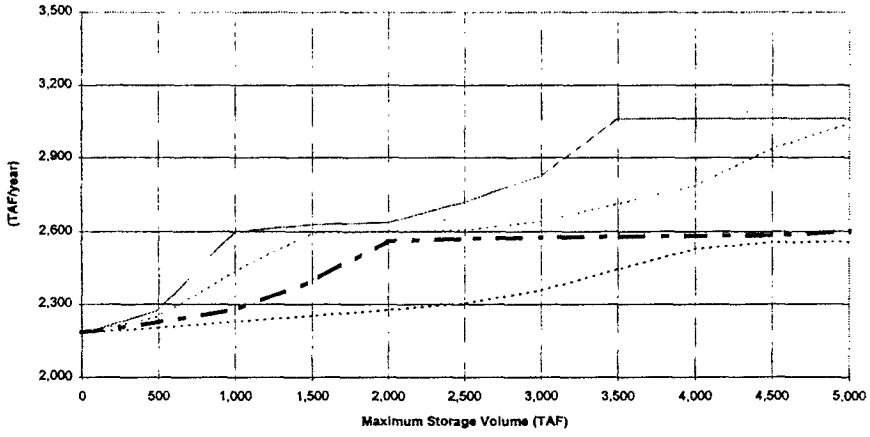
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV07.XLS 2 Charts

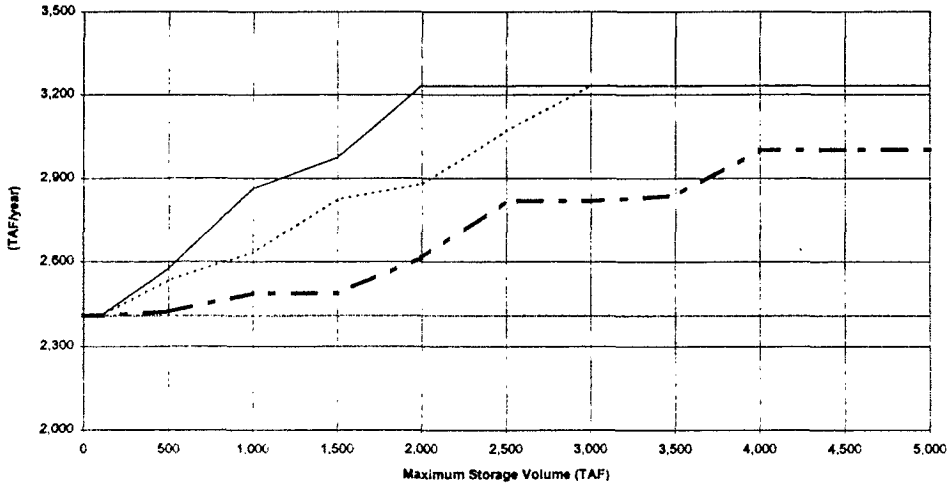
D-006613

Figure NC-7

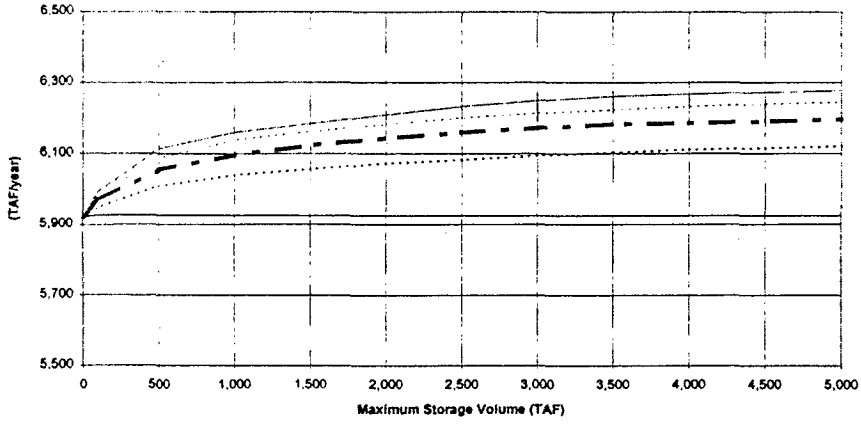
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

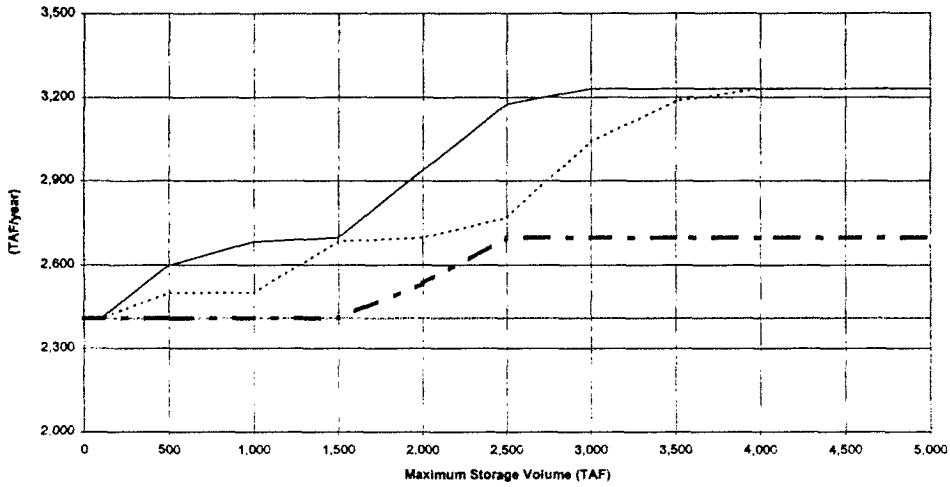
NC_RV04.XLS 2 Chart

Figure NC-8

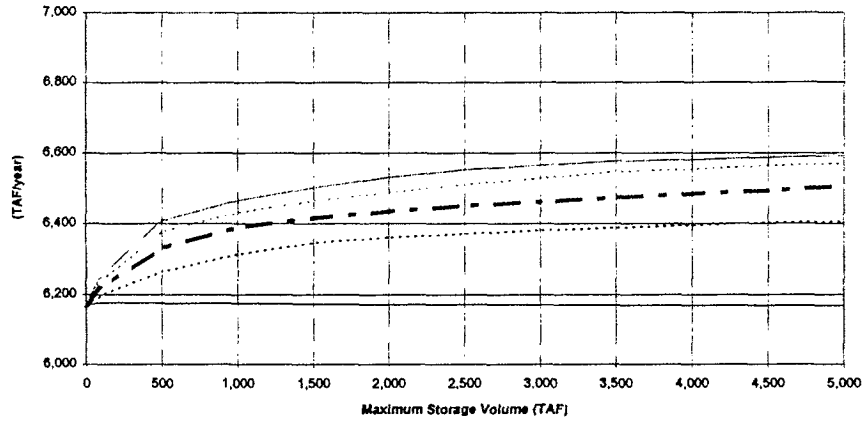
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S.R. Flow Event Target

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note. 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV08.XLS 2 Charts

D-006615

Water Supply Benefits Versus Maximum Storage Volume and Facilities Allocation Factor

Model Runs

Maximum Storage volumes ranging from 100 taf to 5.0 maf and facilities allocation factors ranging from 0 to 100 percent were varied in a set of model runs that simulated the sixteen bracketing operation conditions described previously. The model input parameter sets associated with each of the operation conditions were developed in previous sensitivity analyses for separate environmental water supply operations and agricultural and urban water supply operations for upstream of Delta off-stream storage facilities. The parameter sets for each of the sixteen bracketing operation conditions are described in Table NC-3. The model runs completed for each operation condition, maximum storage volume, and facilities allocation factor are displayed in Table NC-4.

Evaluation

Tables NC-5 through 20 display the five statistical measures of total Environmental Delta Outflow and Agricultural and Urban Water Supply achieved over the range of maximum storage volumes and facilities allocation factors studied for each of the sixteen bracketing operation conditions. Tables NC-21 through NC-36 display net increases in Environmental Delta Outflow and Agricultural and Urban Water Supply for the same range of maximum storage volumes, facilities allocation factors, and operational goals. For comparability, environmental water supply results are measured using the Environmental Delta Outflow criteria (average of January through June monthly Delta outflows up to 12,000 cfs) described previously. Agricultural and urban water supply benefits are measured in terms of deliveries to combined south of Delta SWP and CVP contractors.

Figures NC-9 through NC-24 represent water supply benefits under each of the sixteen operation conditions. Each figure includes six plots (Plots A through F) which display 71-Year annual average, critical year annual average, and minimum annual statistical measures of both Environmental Delta Outflow and Agricultural and Urban Water Supply benefits versus maximum storage volumes. Each plot contains lines representing benefits under facilities allocation factors of 0, 25, 50 , 75, and 100 percent. Evaluations for the sixteen operation conditions are described below.

Operation Condition 1
Existing Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-5 and NC-21 and Figure NC-9 display results for the existing Banks Pumping Plant condition and low Sacramento River flow event target with Normal Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-9 Plots A and B, 71-Year Average Annual benefits vary inversely between environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 488 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits range between -15 and 266 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 589 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -17 and 333 taf with facilities allocation factors varied between 0 and 100 percent.

Under these Normal Period Supply Operations, varying effects are seen in Minimum Annual Water Supply benefits for environmental and agricultural and urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-9 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-9 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 441 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 802 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-21, a net loss in agricultural and urban water supply benefits occurs over the range of facilities allocation factors between 0 and 75 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As environmental water supply operations increase in magnitude and increasing amounts of surplus Delta water are shifted into environmental storage, opportunities for delivery of SWP Interruptible Supply are diminished. Note that in this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP Table A entitlement water.

D-006617

Operation Condition 2
Existing Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-6 and NC-22 and Figure NC-10 display results for the existing Banks Pumping Plant condition and low Sacramento River flow event target with Dry Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-10 Plots E and F, minimum annual benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 736 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits range between 0 and 1,016 taf with facilities allocation factors varied between 0 and 100 percent.

Under these Dry Period Supply Operations, moderate effects are seen in 71-Year Annual Average Water Supply benefits for environmental and agricultural and urban purposes. 71-Year Average Annual Environmental Delta Outflow, as shown in Figure NC-10 Plot A, and 71-Year Average Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-10 Plot B, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 189 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -19 and 194 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 193 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -19 and 256 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-22, a net loss in agricultural and urban water supply benefits occur with a facilities allocation factor of 0 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As environmental water supply operations increase in magnitude and increasing amounts of surplus Delta water are shifted into environmental storage, opportunities for delivery of SWP Interruptible Supply are diminished. Note that in this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP Table A entitlement water.

D-006618

Operation Condition 3
Existing Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-7 and NC-23 and Figure NC-11 display results for the existing Banks Pumping Plant condition and low Sacramento River flow event target with Normal Period Supply Operations for environmental water supply and Dry Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-11 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 491 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -37 and 174 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 589 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -38 and 236 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 1, which included Normal Period Supply Operations for both environmental water supply and agricultural and urban water supply.

Under Normal Period Supply operations for Environmental Delta Outflow and Dry Period Supply Operations for Agricultural and Urban Water Supply Benefits, varied effects are seen in Minimum Annual Water Supply Benefits. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-11 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-11 Plot F, increase throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 644 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 912 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 2, which included Dry Period Supply Operations for both environmental water supply and agricultural and urban water supply.

As shown in Table NC-23, a net loss in Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 and 75 percent. As described earlier, the decrease in 71-Year Average Annual Agricultural and Urban Water Supply is due to reduced opportunities for SWP Interruptible Supply Deliveries as a result of shifting surplus Delta water into environmental storage.

D-006619

Operation Condition 4
Existing Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-8 and NC-24 and Figure NC-12 display results for the existing Banks Pumping Plant condition and low Sacramento River flow event target with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-12 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 189 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 4 and 288 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 193 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 4 and 357 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental Water Supply benefits are reduced in comparison to Operation Condition 1, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply.

Under Dry Period Supply operations for Environmental Delta Outflow and Normal Period Supply Operations for Agricultural and Urban Water Supply Benefits similar effects are seen in Minimum Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-12 Plot E, and Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-12 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 518 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 802 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Environmental Water Supply benefits are similar in comparison to Operation Condition 2, which included Dry Period Supply operations for both environmental water supply and agricultural and urban water supply. However, the ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 2, which included Dry Period Supply operations for both environmental water supply and agricultural and urban water supply.

Operation Condition 5
Expanded Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-9 and NC-25 and Figure NC-13 display results for the expanded Banks Pumping Plant condition and low Sacramento River flow event target with Normal Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-13 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 441 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -26 and 333 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 548 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -31 and 400 taf with facilities allocation factors varied between 0 and 100 percent. These ranges of Agricultural and Urban Water Supply benefits are increased in comparison with Operation Condition 1, which included existing Banks Pumping Plant capacity. However, environmental water supply is reduced in comparison with Operation Condition 1.

Under these Normal Period Supply Operations, varying effects are seen in Minimum Annual Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-13 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-12 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 363 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 853 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-25, a net loss in Minimum Annual Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 and 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As described earlier, opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into environmental storage.

Operation Condition 6
Expanded Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-10 and NC-26 and Figure NC-14 display results for the expanded Banks Pumping Plant condition and low Sacramento River flow event target with Dry Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-14 Plots E and F, Minimum Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 598 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 575 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 904 taf with facilities allocation factors varied between 0 and 100 percent. These ranges are reduced in comparison with Operation Condition 2, which included existing Banks Pumping Plant capacity.

Under these Dry Period Supply Operations, moderate effects are seen in 71-Year Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. 71-Year Average Annual Environmental Delta Outflow, as shown in Figure NC-14 Plot A, and 71-Year Average Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-14 Plot B, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 187 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -51 and 187 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 197 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -54 and 236 taf with facilities allocation factors varied from 0 to 100 percent. These ranges are slightly reduced in comparison with Operation Condition 2, which included existing Banks Pumping Plant capacity.

As shown in Table NC-26, a net loss in Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 to 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As described earlier, opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into environmental storage.

Operation Condition 7
Expanded Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-11 and NC-27 and Figure NC-15 display results for the expanded Banks Pumping Plant condition and low Sacramento River flow event target with Normal Period Supply Operations for environmental water supply and Dry Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-15 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 448 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -79 and 161 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 554 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -82 and 215 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 5, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply.

Under Normal Period Supply operations for Environmental Delta Outflow and Dry Period Supply Operations for Agricultural and Urban Water Supply Benefits, varied effects are seen in Minimum Annual Water Supply Benefits. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-15 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-15 Plot F, increase throughout the ranges of maximum storage volume and facilities allocation factors examined. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 454 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 881 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-27, a net loss in Minimum Annual Agricultural and Urban Water Supply Benefits occur over the range of facilities allocation factors between 0 to 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. Opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into new storage.

Operation Condition 8
Expanded Banks Pumping Plant Conditions and Low Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-12 and NC-28 and Figure NC-16 display results for the expanded Banks Pumping Plant condition and low Sacramento River flow event target with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-16 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 186 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 3 and 363 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 197 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 423 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental Water Supply benefits are reduced in comparison to Operation Condition 5, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply.

Under Dry Period Supply operations for Environmental Delta Outflow and Normal Period Supply Operations for Agricultural and Urban Water Supply Benefits similar effects are seen in Minimum Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-16 Plot E, and Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-16 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 526 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 434 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 821 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 853 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-28, no net losses in Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 and 100 percent under these conditions.

D-006624

Operation Condition 9
Existing Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-13 and NC-29 and Figure NC-17 display results for the existing Banks Pumping Plant condition and high Sacramento River flow event target with Normal Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-17 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 313 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -10 and 184 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 438 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -11 and 240 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental Delta Outflow and Agricultural and Urban Water Supply are reduced in comparison to Operation Condition 1, which included a low Sacramento River flow event target.

Under these Normal Period Supply Operations, varying effects are seen in Minimum Annual Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-17 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-17 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 326 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 719 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 1, which included a low Sacramento River flow event target.

As shown in Table NC-29, a net loss in Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 and 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. Opportunities for delivery of SWP Interruptible Supply are diminished as environmental water supply operations increase in magnitude and increasing amounts of surplus Delta water are shifted into new storage.

Operation Condition 10
Existing Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-14 and NC-30 and Figure NC-18 display results for the existing Banks Pumping Plant condition and high Sacramento River flow event target with Dry Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-18 Plots E and F, Minimum Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 288 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 401 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 288 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 832 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 2, which included a low Sacramento River flow event target.

Under these Dry Period Supply Operations, moderate effects are seen in 71-Year Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. 71-Year Average Annual Environmental Delta Outflow, as shown in Figure NC-18 Plot A, and 71-Year Average Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-18 Plot B, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 146 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -18 and 117 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 163 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -18 and 165 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 2, which included a low Sacramento River flow event target.

As shown in Table NC-30, a net loss in Agricultural and Urban Water Supply Benefits occurs with a facilities allocation factor of 0 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As described earlier, opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into environmental storage.

Operation Condition 11
Existing Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-15 and NC-31 and Figure NC-19 display results for the existing Banks Pumping Plant condition and high Sacramento River flow event target with Normal Period Supply Operations for environmental water supply and Dry Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-19 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 313 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -33 and 108 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 438 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -35 and 157 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 9, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. These ranges of 71-Year average annual benefits for both environmental and agricultural and urban water supply are reduced in comparison to Operation Condition 3, which included a low Sacramento River flow event target.

Under Normal Period Supply operations for Environmental Delta Outflow and Dry Period Supply Operations for Agricultural and Urban Water Supply Benefits, varied effects are seen in Minimum Annual Water Supply Benefits. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-19 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-19 Plot F, increase throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 391 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 831 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-31, a net loss in Agricultural and Urban Water Supply Benefits occurs over a range of facilities allocation factors between 0 and 100 percent. This occurs primarily due to a decrease in SWP Interruptible deliveries. Opportunities for SWP Interruptible Supply Deliveries as a result of shifting surplus Delta water into new storage.

Operation Condition 12
Existing Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-16 and NC-32 and Figure NC-20 display results for the existing Banks Pumping Plant condition and high Sacramento River flow event target with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-20 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 146 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 6 and 193 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 163 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 6 and 248 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental Water Supply benefits are reduced in comparison to Operation Condition 9, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. These ranges of 71-Year average annual benefits for both Environmental Delta Outflow and Agricultural and Urban Water Supply are reduced in comparison to Operation Condition 4, which included a low Sacramento River flow event target.

Under Dry Period Supply operations for Environmental Delta Outflow and Normal Period Supply Operations for Agricultural and Urban Water Supply Benefits similar effects are seen in Minimum Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-20 Plot E, and Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-20 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 288 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 326 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 288 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 802 taf with facilities allocation factors varied from 0 to 100 percent. These ranges of minimum annual benefits for both Environmental Delta Outflow and Agricultural and Urban Water Supply are reduced in comparison to Operation Condition 4, which included a low Sacramento River flow event target.

Operation Condition 13
Expanded Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-17 and NC-33 and Figure NC-21 display results for the expanded Banks Pumping Plant condition and high Sacramento River flow event target with Normal Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-21 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 304 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -18 and 237 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 429 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between -20 and 327 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 5, which included a low Sacramento River flow event target.

Under these Normal Period Supply Operations, varying effects are seen in Minimum Annual Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-21 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-21 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 363 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 363 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 5, which included a low Sacramento River flow event target.

As shown in Table NC-33, a net loss in Minimum Annual Agricultural and Urban Water Supply Benefits occur over the range of facilities allocation factors between 0 and 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. Opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into new storage.

Operation Condition 14
Expanded Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-18 and NC-34 and Figure NC-22 display results for the expanded Banks Pumping Plant condition and high Sacramento River flow event target with Dry Period Supply Operations for both environmental and agriculture and urban water supply. As shown in Figure NC-22 Plots E and F, Minimum Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 289 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 383 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 289 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits range between 0 and 810 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 6, which included a low Sacramento River flow event target.

Under these Dry Period Supply Operations, moderate effects are seen in 7'-Year Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. 71-Year Average Annual Environmental Delta Outflow, as shown in Figure NC-22 Plot A, and 71-Year Average Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-22 Plot B, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 147 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -45 and 124 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 164 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits ranges between -45 and 171 taf with facilities allocation factors varied from 0 to 100 percent. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 6, which included a low Sacramento River flow event target.

As shown in Table NC-34, a net loss in Minimum Annual Agricultural and Urban Water Supply Benefits occur over the range of facilities allocation factors between 0 to 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. Opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into new storage.

Operation Condition 15
Expanded Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Normal Period Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Supply Operations

Tables NC-19 and NC-35 and Figure NC-23 display results for the expanded Banks Pumping Plant condition and high Sacramento River flow event target with Normal Period Supply Operations for environmental water supply and Dry Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-23 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 304 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits range between -68 and 106 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 429 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits range between -70 and 156 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 13, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. These ranges for Environmental and Agricultural and Urban Water Supply benefits are reduced in comparison to Operation Condition 7, which included a low Sacramento River flow event target.

Under Normal Period Supply operations for Environmental Delta Outflow and Dry Period Supply Operations for Agricultural and Urban Water Supply Benefits, varied effects are seen in Minimum Annual Water Supply Benefits. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-23 Plot E, is unaffected throughout the ranges of maximum storage volume and facilities allocation factors examined. However, Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-23 Plot F, increase throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 383 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 810 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-35, a net loss in Minimum Annual Agricultural and Urban Water Supply Benefits occur over the range of facilities allocation factors between 0 to 100 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. Opportunities for delivery of SWP Interruptible Supply are diminished as increasing amounts of surplus Delta water are shifted into new storage.

Operation Condition 16
Expanded Banks Pumping Plant Conditions and High Sacramento River Flow Event Target
Environmental Water Supply Goal: Dry Period Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Supply Operations

Tables NC-20 and NC-36 and Figure NC-24 display results for the expanded Banks Pumping Plant condition and high Sacramento River flow event target with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agriculture and urban water supply. As shown in Figure NC-24 Plots A and B, 71-Year Average Annual Benefits vary inversely between and environmental and agriculture and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage volume of 2.0 maf, with diminishing incremental benefits for maximum storage volumes between 2.0 and 5.0 maf. At 2.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 147 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 6 and 255 taf with facilities allocation factors varied between 0 and 100 percent. At 5.0 maf maximum storage volume, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 164 and 0 taf and net increase in 71-year Average Annual Agricultural and Urban Water Supply Benefits ranges between 6 and 342 taf with facilities allocation factors varied between 0 and 100 percent. These ranges for Environmental Water Supply benefits are reduced in comparison to Operation Condition 13, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. These ranges for both environmental water supply and agricultural and urban water supply benefits are reduced in comparison to Operation Condition 8, which included low Sacramento River flow event target.

Under Dry Period Supply operations for Environmental Delta Outflow and Normal Period Supply Operations for Agricultural and Urban Water Supply Benefits similar effects are seen in Minimum Annual Average Water Supply Benefits for Environmental and Agricultural and Urban purposes. Minimum Annual Environmental Delta Outflow, as shown in Figure NC-24 Plot E, and Minimum Annual Agricultural and Urban Water Supply Benefits, as shown in Figure NC-24 Plot F, increase slightly throughout the ranges of maximum storage volume and facilities allocation factors examined. At 2.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 289 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 363 taf with facilities allocation factors varied from 0 to 100 percent. At 5.0 maf maximum storage volume, net increase in Minimum Annual Environmental Delta Outflow ranges between 289 and 0 taf and net increase in Minimum Annual Agricultural and Urban Water Supply Benefits ranges between 0 and 363 taf with facilities allocation factors varied from 0 to 100 percent.

As shown in Table NC-36, no net losses in Agricultural and Urban Water Supply Benefits occurs over the range of facilities allocation factors between 0 and 100 percent under these conditions.

Table NC-3

Upstream of Delta Off-Stream Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Operational Parameters
1. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
2. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP-only
3. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP-only
4. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

NC_RVSM.XLS: Conditions Table 1

Table NC-3 (Continued)

Upstream of Delta Off-Stream Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Operational Parameters
5. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
6. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 30% Unmet Demand Target = SWP-only
7. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 30% Unmet Demand Target = SWP-only
8. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 200 taf S.R. Flow Event (2 month) Target = 400 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

NC_RVSM.XLS: Conditions Table 2

Table NC-3 (Continued)

Upstream of Delta Off-Stream Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Operational Parameters
9. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
10. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 20% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP-only
11. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP-only
12. Existing Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 20% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

Table NC-3 (Continued)

Upstream of Delta Off-Stream Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Operational Parameters
13. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
14. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 20% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 30% Unmet Demand Target = SWP-only
15. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 0% Unmet Demand Target Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 30% Unmet Demand Target = SWP-only
16. Expanded Banks Pumping Plant Capacity S.R. Flow Event (1 month) Target = 1,500 taf S.R. Flow Event (2 month) Target = 2,650 taf Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	5,000 cfs Inflow/Outflow Capacity Env. Storage Carryover Factor = 20% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

NC_RVSM.XLS: Conditions Table 4

Table NC-4

Upstream of Delta Off-Stream Storage
Model Runs for Evaluation of Maximum Reservoir Volume and Facilities Allocation Factor

Operation Condition	Inflow Workbook	Reservoir Workbook	Maximum Reservoir Volume (taf)	Model Run Identifiers: Facilities Allocation Factor 0%	Facilities Allocation Factor 25%	Facilities Allocation Factor 50%	Facilities Allocation Factor 75%	Facilities Allocation Factor 100%
1. Existing Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	OUT_NC01.XLS	NC_RV01.XLS	100	NC101	NC112	NC123	NC134	NC145
			500	NC102	NC113	NC124	NC135	NC146
			1,000	NC103	NC114	NC125	NC136	NC147
			1,500	NC104	NC115	NC126	NC137	NC148
			2,000	NC105	NC116	NC127	NC138	NC149
			2,500	NC106	NC117	NC128	NC139	NC150
			3,000	NC107	NC118	NC129	NC140	NC151
			3,500	NC108	NC119	NC130	NC141	NC152
			4,000	NC109	NC120	NC131	NC142	NC153
			4,500	NC110	NC121	NC132	NC143	NC154
			5,000	NC111	NC122	NC133	NC144	NC155
2. Existing Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	OUT_NC02.XLS	NC_RV02.XLS	100	NC201	NC212	NC223	NC234	NC245
			500	NC202	NC213	NC224	NC235	NC246
			1,000	NC203	NC214	NC225	NC236	NC247
			1,500	NC204	NC215	NC226	NC237	NC248
			2,000	NC205	NC216	NC227	NC238	NC249
			2,500	NC206	NC217	NC228	NC239	NC250
			3,000	NC207	NC218	NC229	NC240	NC251
			3,500	NC208	NC219	NC230	NC241	NC252
			4,000	NC209	NC220	NC231	NC242	NC253
			4,500	NC210	NC221	NC232	NC243	NC254
			5,000	NC211	NC222	NC233	NC244	NC255
3. Existing Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	OUT_NC03.XLS	NC_RV03.XLS	100	NC301	NC312	NC323	NC334	NC345
			500	NC302	NC313	NC324	NC335	NC346
			1,000	NC303	NC314	NC325	NC336	NC347
			1,500	NC304	NC315	NC326	NC337	NC348
			2,000	NC305	NC316	NC327	NC338	NC349
			2,500	NC306	NC317	NC328	NC339	NC350
			3,000	NC307	NC318	NC329	NC340	NC351
			3,500	NC308	NC319	NC330	NC341	NC352
			4,000	NC309	NC320	NC331	NC342	NC353
			4,500	NC310	NC321	NC332	NC343	NC354
			5,000	NC311	NC322	NC333	NC344	NC355
4. Existing Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	OUT_NC04.XLS	NC_RV04.XLS	100	NC401	NC412	NC423	NC434	NC445
			500	NC402	NC413	NC424	NC435	NC446
			1,000	NC403	NC414	NC425	NC436	NC447
			1,500	NC404	NC415	NC426	NC437	NC448
			2,000	NC405	NC416	NC427	NC438	NC449
			2,500	NC406	NC417	NC428	NC439	NC450
			3,000	NC407	NC418	NC429	NC440	NC451
			3,500	NC408	NC419	NC430	NC441	NC452
			4,000	NC409	NC420	NC431	NC442	NC453
			4,500	NC410	NC421	NC432	NC443	NC454
			5,000	NC411	NC422	NC433	NC444	NC455
5. Expanded Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	OUT_NC05.XLS	NC_RV05.XLS	100	NC501	NC512	NC523	NC534	NC545
			500	NC502	NC513	NC524	NC535	NC546
			1,000	NC503	NC514	NC525	NC536	NC547
			1,500	NC504	NC515	NC526	NC537	NC548
			2,000	NC505	NC516	NC527	NC538	NC549
			2,500	NC506	NC517	NC528	NC539	NC550
			3,000	NC507	NC518	NC529	NC540	NC551
			3,500	NC508	NC519	NC530	NC541	NC552
			4,000	NC509	NC520	NC531	NC542	NC553
			4,500	NC510	NC521	NC532	NC543	NC554
			5,000	NC511	NC522	NC533	NC544	NC555
6. Expanded Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	OUT_NC06.XLS	NC_RV06.XLS	100	NC601	NC612	NC623	NC634	NC645
			500	NC602	NC613	NC624	NC635	NC646
			1,000	NC603	NC614	NC625	NC636	NC647
			1,500	NC604	NC615	NC626	NC637	NC648
			2,000	NC605	NC616	NC627	NC638	NC649
			2,500	NC606	NC617	NC628	NC639	NC650
			3,000	NC607	NC618	NC629	NC640	NC651
			3,500	NC608	NC619	NC630	NC641	NC652
			4,000	NC609	NC620	NC631	NC642	NC653
			4,500	NC610	NC621	NC632	NC643	NC654
			5,000	NC611	NC622	NC633	NC644	NC655
7. Expanded Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	OUT_NC07.XLS	NC_RV07.XLS	100	NC701	NC712	NC723	NC734	NC745
			500	NC702	NC713	NC724	NC735	NC746
			1,000	NC703	NC714	NC725	NC736	NC747
			1,500	NC704	NC715	NC726	NC737	NC748
			2,000	NC705	NC716	NC727	NC738	NC749
			2,500	NC706	NC717	NC728	NC739	NC750
			3,000	NC707	NC718	NC729	NC740	NC751
			3,500	NC708	NC719	NC730	NC741	NC752
			4,000	NC709	NC720	NC731	NC742	NC753
			4,500	NC710	NC721	NC732	NC743	NC754
			5,000	NC711	NC722	NC733	NC744	NC755
8. Expanded Banks Pumping Plant Capacity Low Sacramento River Flow Event Target Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	OUT_NC08.XLS	NC_RV08.XLS	100	NC801	NC812	NC823	NC834	NC845
			500	NC802	NC813	NC824	NC835	NC846
			1,000	NC803	NC814	NC825	NC836	NC847
			1,500	NC804	NC815	NC826	NC837	NC848
			2,000	NC805	NC816	NC827	NC838	NC849
			2,500	NC806	NC817	NC828	NC839	NC850
			3,000	NC807	NC818	NC829	NC840	NC851
			3,500	NC808	NC819	NC830	NC841	NC852
			4,000	NC809	NC820	NC831	NC842	NC853
			4,500	NC810	NC821	NC832	NC843	NC854
			5,000	NC811	NC822	NC833	NC844	NC855

NC_RVSM.XLS, Runs

Table NC-4 (Continued)

Upstream of Delta Off-Stream Storage
Model Runs for Evaluation of Maximum Reservoir Volume and Facilities Allocation Factor

Model Run Identifiers								
Model Run Description	Input Data Workbook	Output Results Workbook	Maximum Reservoir Volume (taf)	Facilities Allocation Factor 0%	Facilities Allocation Factor 25%	Facilities Allocation Factor 50%	Facilities Allocation Factor 75%	Facilities Allocation Factor 100%
9 Existing Banks Pumping Plant Capacity	OUT_NC09.XLS	NC_RV09.XLS	100	NC901	NC912	NC923	NC934	NC945
High Sacramento River Flow Event Target			500	NC902	NC913	NC924	NC935	NC946
Environmental Storage: Normal Period Supply Operation			1,000	NC903	NC914	NC925	NC936	NC947
Ag & Urban Storage: Normal Period Supply Operation			1,500	NC904	NC915	NC926	NC937	NC948
			2,000	NC905	NC916	NC927	NC938	NC949
			2,500	NC906	NC917	NC928	NC939	NC950
			3,000	NC907	NC918	NC929	NC940	NC951
			3,500	NC908	NC919	NC930	NC941	NC952
			4,000	NC909	NC920	NC931	NC942	NC953
			4,500	NC910	NC921	NC932	NC943	NC954
			5,000	NC911	NC922	NC933	NC944	NC955
10 Existing Banks Pumping Plant Capacity	OUT_NC10.XLS	NC_RV10.XLS	100	NC1001	NC1012	NC1023	NC1034	NC1045
High Sacramento River Flow Event Target			500	NC1002	NC1013	NC1024	NC1035	NC1046
Environmental Storage: Dry Period Supply Operation			1,000	NC1003	NC1014	NC1025	NC1036	NC1047
Ag & Urban Storage: Dry Period Supply Operation			1,500	NC1004	NC1015	NC1026	NC1037	NC1048
			2,000	NC1005	NC1016	NC1027	NC1038	NC1049
			2,500	NC1006	NC1017	NC1028	NC1039	NC1050
			3,000	NC1007	NC1018	NC1029	NC1040	NC1051
			3,500	NC1008	NC1019	NC1030	NC1041	NC1052
			4,000	NC1009	NC1020	NC1031	NC1042	NC1053
			4,500	NC1010	NC1021	NC1032	NC1043	NC1054
			5,000	NC1011	NC1022	NC1033	NC1044	NC1055
11 Existing Banks Pumping Plant Capacity	OUT_NC11.XLS	NC_RV11.XLS	100	NC1101	NC1112	NC1123	NC1134	NC1145
High Sacramento River Flow Event Target			500	NC1102	NC1113	NC1124	NC1135	NC1146
Environmental Storage: Normal Period Supply Operation			1,000	NC1103	NC1114	NC1125	NC1136	NC1147
Ag & Urban Storage: Dry Period Supply Operation			1,500	NC1104	NC1115	NC1126	NC1137	NC1148
			2,000	NC1105	NC1116	NC1127	NC1138	NC1149
			2,500	NC1106	NC1117	NC1128	NC1139	NC1150
			3,000	NC1107	NC1118	NC1129	NC1140	NC1151
			3,500	NC1108	NC1119	NC1130	NC1141	NC1152
			4,000	NC1109	NC1120	NC1131	NC1142	NC1153
			4,500	NC1110	NC1121	NC1132	NC1143	NC1154
			5,000	NC1111	NC1122	NC1133	NC1144	NC1155
12 Existing Banks Pumping Plant Capacity	OUT_NC12.XLS	NC_RV12.XLS	100	NC1201	NC1212	NC1223	NC1234	NC1245
High Sacramento River Flow Event Target			500	NC1202	NC1213	NC1224	NC1235	NC1246
Environmental Storage: Dry Period Supply Operation			1,000	NC1203	NC1214	NC1225	NC1236	NC1247
Ag & Urban Storage: Normal Period Supply Operation			1,500	NC1204	NC1215	NC1226	NC1237	NC1248
			2,000	NC1205	NC1216	NC1227	NC1238	NC1249
			2,500	NC1206	NC1217	NC1228	NC1239	NC1250
			3,000	NC1207	NC1218	NC1229	NC1240	NC1251
			3,500	NC1208	NC1219	NC1230	NC1241	NC1252
			4,000	NC1209	NC1220	NC1231	NC1242	NC1253
			4,500	NC1210	NC1221	NC1232	NC1243	NC1254
			5,000	NC1211	NC1222	NC1233	NC1244	NC1255
13 Expanded Banks Pumping Plant Capacity	OUT_NC13.XLS	NC_RV13.XLS	100	NC1301	NC1312	NC1323	NC1334	NC1345
High Sacramento River Flow Event Target			500	NC1302	NC1313	NC1324	NC1335	NC1346
Environmental Storage: Normal Period Supply Operation			1,000	NC1303	NC1314	NC1325	NC1336	NC1347
Ag & Urban Storage: Normal Period Supply Operation			1,500	NC1304	NC1315	NC1326	NC1337	NC1348
			2,000	NC1305	NC1316	NC1327	NC1338	NC1349
			2,500	NC1306	NC1317	NC1328	NC1339	NC1350
			3,000	NC1307	NC1318	NC1329	NC1340	NC1351
			3,500	NC1308	NC1319	NC1330	NC1341	NC1352
			4,000	NC1309	NC1320	NC1331	NC1342	NC1353
			4,500	NC1310	NC1321	NC1332	NC1343	NC1354
			5,000	NC1311	NC1322	NC1333	NC1344	NC1355
14 Expanded Banks Pumping Plant Capacity	OUT_NC14.XLS	NC_RV14.XLS	100	NC1401	NC1412	NC1423	NC1434	NC1445
High Sacramento River Flow Event Target			500	NC1402	NC1413	NC1424	NC1435	NC1446
Environmental Storage: Dry Period Supply Operation			1,000	NC1403	NC1414	NC1425	NC1436	NC1447
Ag & Urban Storage: Dry Period Supply Operation			1,500	NC1404	NC1415	NC1426	NC1437	NC1448
			2,000	NC1405	NC1416	NC1427	NC1438	NC1449
			2,500	NC1406	NC1417	NC1428	NC1439	NC1450
			3,000	NC1407	NC1418	NC1429	NC1440	NC1451
			3,500	NC1408	NC1419	NC1430	NC1441	NC1452
			4,000	NC1409	NC1420	NC1431	NC1442	NC1453
			4,500	NC1410	NC1421	NC1432	NC1443	NC1454
			5,000	NC1411	NC1422	NC1433	NC1444	NC1455
15 Expanded Banks Pumping Plant Capacity	OUT_NC15.XLS	NC_RV15.XLS	100	NC1501	NC1512	NC1523	NC1534	NC1545
High Sacramento River Flow Event Target			500	NC1502	NC1513	NC1524	NC1535	NC1546
Environmental Storage: Normal Period Supply Operation			1,000	NC1503	NC1514	NC1525	NC1536	NC1547
Ag & Urban Storage: Dry Period Supply Operation			1,500	NC1504	NC1515	NC1526	NC1537	NC1548
			2,000	NC1505	NC1516	NC1527	NC1538	NC1549
			2,500	NC1506	NC1517	NC1528	NC1539	NC1550
			3,000	NC1507	NC1518	NC1529	NC1540	NC1551
			3,500	NC1508	NC1519	NC1530	NC1541	NC1552
			4,000	NC1509	NC1520	NC1531	NC1542	NC1553
			4,500	NC1510	NC1521	NC1532	NC1543	NC1554
			5,000	NC1511	NC1522	NC1533	NC1544	NC1555
16 Expanded Banks Pumping Plant Capacity	OUT_NC16.XLS	NC_RV16.XLS	100	NC1601	NC1612	NC1623	NC1634	NC1645
High Sacramento River Flow Event Target			500	NC1602	NC1613	NC1624	NC1635	NC1646
Environmental Storage: Dry Period Supply Operation			1,000	NC1603	NC1614	NC1625	NC1636	NC1647
Ag & Urban Storage: Normal Period Supply Operation			1,500	NC1604	NC1615	NC1626	NC1637	NC1648
			2,000	NC1605	NC1616	NC1627	NC1638	NC1649
			2,500	NC1606	NC1617	NC1628	NC1639	NC1650
			3,000	NC1607	NC1618	NC1629	NC1640	NC1651
			3,500	NC1608	NC1619	NC1630	NC1641	NC1652
			4,000	NC1609	NC1620	NC1631	NC1642	NC1653
			4,500	NC1610	NC1621	NC1632	NC1643	NC1654
			5,000	NC1611	NC1622	NC1633	NC1644	NC1655

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Table NC-5

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC111	NC112	NC113	NC114	NC115	NC116	NC117	NC118	NC119	NC120	NC121	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,861	4,077	4,174	4,226	4,262	4,293	4,318	4,338	4,349	4,367	4,363	4,363	589	15.6%
1928-34 Dry Period Average	3,249	3,305	3,408	3,475	3,542	3,607	3,671	3,674	3,674	3,674	3,674	3,674	3,674	425	13.1%
Dry Year Average	3,484	3,598	3,943	4,158	4,273	4,345	4,418	4,434	4,478	4,500	4,500	4,500	4,500	1,016	29.2%
Critically Dry Year Average	2,942	2,978	3,067	3,196	3,327	3,460	3,643	3,618	3,639	3,689	3,706	3,744	3,744	802	27.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,911	5,907	5,907	5,906	5,906	5,906	5,904	5,904	5,904	5,904	5,904	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,891	3,884	3,884	3,884	3,884	3,884	3,884	3,884	3,884	3,884	3,884	3,918	0	0.0%
Dry Year Average	5,374	5,358	5,345	5,343	5,343	5,343	5,343	5,343	5,343	5,343	5,343	5,343	5,374	0	0.0%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,364	3,364	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	NC112	NC113	NC114	NC115	NC116	NC117	NC118	NC119	NC120	NC121	NC122	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,840	4,013	4,096	4,141	4,172	4,195	4,214	4,233	4,251	4,266	4,274	4,274	500	13.2%
1928-34 Dry Period Average	3,249	3,291	3,375	3,426	3,476	3,527	3,576	3,578	3,578	3,578	3,578	3,578	3,578	329	10.1%
Dry Year Average	3,484	3,570	3,827	3,969	4,103	4,158	4,222	4,264	4,292	4,292	4,315	4,353	4,353	869	25.0%
Critically Dry Year Average	2,942	2,969	3,035	3,129	3,228	3,317	3,375	3,437	3,505	3,567	3,563	3,576	3,583	641	21.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,934	5,969	6,022	6,038	6,051	6,061	6,071	6,081	6,086	6,092	6,098	6,098	177	3.0%
1928-34 Dry Period Average	3,918	3,905	3,927	3,944	3,961	3,978	3,991	3,989	3,989	3,989	3,989	3,989	3,991	73	1.9%
Dry Year Average	5,374	5,385	5,445	5,465	5,508	5,532	5,556	5,576	5,595	5,609	5,618	5,625	5,625	251	4.7%
Critically Dry Year Average	3,421	3,393	3,411	3,434	3,467	3,495	3,514	3,524	3,535	3,546	3,565	3,586	3,586	165	4.8%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,327	2,448	2,562	2,562	2,562	2,562	356	16.1%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	NC123	NC124	NC125	NC126	NC127	NC128	NC129	NC130	NC131	NC132	NC133	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,818	3,948	4,019	4,064	4,092	4,111	4,123	4,135	4,147	4,160	4,172	4,172	356	10.5%
1928-34 Dry Period Average	3,249	3,277	3,337	3,370	3,404	3,439	3,468	3,465	3,465	3,465	3,465	3,465	3,468	220	6.8%
Dry Year Average	3,484	3,541	3,709	3,818	3,910	3,990	4,033	4,080	4,085	4,119	4,145	4,172	4,172	688	19.7%
Critically Dry Year Average	2,942	2,980	2,998	3,050	3,116	3,175	3,216	3,235	3,257	3,286	3,327	3,368	3,368	426	14.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,954	6,035	6,077	6,106	6,132	6,150	6,159	6,168	6,174	6,181	6,187	6,187	266	4.5%
1928-34 Dry Period Average	3,918	3,919	3,958	3,982	4,026	4,058	4,091	4,095	4,095	4,095	4,095	4,095	4,095	177	4.5%
Dry Year Average	5,374	5,408	5,520	5,572	5,606	5,632	5,644	5,644	5,652	5,654	5,654	5,665	5,665	292	5.4%
Critically Dry Year Average	3,421	3,404	3,451	3,512	3,576	3,657	3,721	3,765	3,803	3,842	3,884	3,909	3,909	488	14.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,397	2,590	2,590	2,590	2,590	2,590	2,590	2,590	2,590	384	17.4%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC134	NC135	NC136	NC137	NC138	NC139	NC140	NC141	NC142	NC143	NC144	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,796	3,866	3,928	3,966	3,997	4,017	4,030	4,040	4,043	4,049	4,057	4,057	283	7.5%
1928-34 Dry Period Average	3,249	3,263	3,293	3,311	3,327	3,345	3,358	3,339	3,339	3,339	3,339	3,339	3,358	109	3.4%
Dry Year Average	3,484	3,513	3,594	3,644	3,688	3,738	3,786	3,814	3,842	3,849	3,872	3,897	3,897	413	11.9%
Critically Dry Year Average	2,942	2,951	2,969	2,980	3,001	3,029	3,043	3,043	3,054	3,066	3,076	3,087	3,087	146	4.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,970	6,086	6,112	6,143	6,163	6,180	6,192	6,202	6,211	6,222	6,229	6,229	308	5.2%
1928-34 Dry Period Average	3,918	3,932	3,969	4,036	4,088	4,137	4,187	4,205	4,205	4,205	4,205	4,205	4,205	287	7.3%
Dry Year Average	5,374	5,426	5,574	5,630	5,637	5,638	5,640	5,667	5,681	5,681	5,689	5,689	5,689	315	5.9%
Critically Dry Year Average	3,421	3,415	3,516	3,614	3,738	3,864	3,964	3,998	4,040	4,099	4,128	4,160	4,160	739	21.8%
Minimum Annual	2,206	2,206	2,206	2,474	2,618	2,618	2,618	2,618	2,618	2,618	2,618	2,854	2,854	648	29.4%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC145	NC146	NC147	NC148	NC149	NC150	NC151	NC152	NC153	NC154	NC155	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928 34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,960	6,089	6,136	6,161	6,187	6,209	6,224	6,236	6,243	6,249	6,254	6,254	333	5.6%
1928-34 Dry Period Average	3,918	3,942	4,020	4,086	4,151	4,217	4,282	4,315	4,315	4,315	4,315	4,315	4,315	387	10.1%
Dry Year Average	5,374	5,443	5,618	5,650	5,645	5,697	5,747	5,748	5,747	5,747	5,746	5,748	5,748	374	7.0%
Critically Dry Year Average	3,421	3,426	3,586	3,744	3,911	4,009	4,074	4,171	4,209	4,247	4,285	4,322	4,322	901	26.3%
Minimum Annual	2,206	2,206	2,241	2,647	2,647	2,647	2,647	2,647	3,009	3,009	3,009	3,009	3,009	802	36.4%

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Table NC-6

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC201	NC202	NC203	NC204	NC205	NC206	NC207	NC208	NC209	NC210	NC211	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,827	3,913	3,942	3,958	3,963	3,967	3,967	3,967	3,967	3,967	3,967	3,967	193	5.1%
1928-34 Dry Period Average	3,249	3,294	3,420	3,502	3,580	3,612	3,651	3,651	3,651	3,651	3,651	3,651	3,651	403	12.4%
Dry Year Average	3,484	3,592	3,744	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	284	8.2%
Critically Dry Year Average	2,942	3,004	3,215	3,354	3,460	3,494	3,519	3,519	3,519	3,519	3,519	3,519	3,519	577	19.6%
Minimum Annual	2,410	2,410	2,575	2,896	3,006	3,231	3,231	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,903	5,903	5,903	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,922	3,922	3,922	3,922	3,922	3,922	3,922	3,922	3,922	3,922	3,922	3,922	4	0.1%
Dry Year Average	6,374	6,366	6,366	6,366	6,366	6,366	6,366	6,366	6,366	6,366	6,366	6,366	6,374	0	0.0%
Critically Dry Year Average	3,421	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	10	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	NC212	NC213	NC214	NC215	NC216	NC217	NC218	NC219	NC220	NC221	NC222	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,815	3,893	3,922	3,938	3,950	3,959	3,963	3,967	3,967	3,967	3,967	3,967	193	5.1%
1928-34 Dry Period Average	3,249	3,283	3,378	3,442	3,487	3,532	3,573	3,614	3,651	3,651	3,651	3,651	3,651	403	12.4%
Dry Year Average	3,484	3,567	3,725	3,754	3,767	3,767	3,767	3,767	3,767	3,767	3,767	3,767	3,767	283	8.1%
Critically Dry Year Average	2,942	2,988	3,132	3,251	3,333	3,413	3,465	3,495	3,517	3,516	3,516	3,516	3,517	575	19.5%
Minimum Annual	2,410	2,410	2,536	2,635	2,852	2,875	3,100	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,920	6,962	5,987	6,000	6,012	6,022	6,031	6,039	6,045	6,048	6,051	6,051	130	2.2%
1928-34 Dry Period Average	3,918	3,937	3,969	3,992	4,008	4,024	4,041	4,057	4,074	4,090	4,074	4,090	4,090	172	4.4%
Dry Year Average	6,374	6,388	6,461	6,503	6,522	6,544	6,566	6,571	6,580	6,588	6,581	6,564	6,564	220	4.1%
Critically Dry Year Average	3,421	3,443	3,471	3,490	3,514	3,542	3,568	3,588	3,608	3,628	3,635	3,642	3,642	221	6.5%
Minimum Annual	2,206	2,212	2,236	2,296	2,296	2,328	2,361	2,421	2,481	2,542	2,602	2,640	2,640	434	19.7%

Facilities Allocation Factor = 34%

Run Identifiers	Base 1	NC223	NC224	NC225	NC226	NC227	NC228	NC229	NC230	NC231	NC232	NC233	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,802	3,868	3,894	3,911	3,926	3,935	3,942	3,947	3,952	3,955	3,956	3,956	182	4.8%
1928-34 Dry Period Average	3,249	3,272	3,337	3,379	3,413	3,444	3,475	3,506	3,535	3,561	3,562	3,562	3,562	313	9.6%
Dry Year Average	3,484	3,540	3,685	3,721	3,744	3,767	3,767	3,767	3,767	3,767	3,767	3,767	3,767	283	8.1%
Critically Dry Year Average	2,942	2 972	3,049	3,137	3,207	3,257	3,316	3,356	3,393	3,425	3,443	3,449	3,449	507	17.3%
Minimum Annual	2,410	2,410	2,425	2,490	2,490	2,637	2,818	2,817	2,863	3,044	3,046	3,046	3,046	636	26.4%
Ag & Urban Benefits															
71-Year Average	5,921	5,933	5,997	6,030	6,049	6,065	6,078	6,087	6,096	6,099	6,105	6,108	6,108	187	3.2%
1928-34 Dry Period Average	3,918	3,949	4,010	4,053	4,084	4,117	4,149	4,182	4,215	4,191	4,190	4,190	4,215	297	7.6%
Dry Year Average	6,374	6,409	6,524	6,583	6,608	6,631	6,649	6,656	6,666	6,667	6,667	6,660	6,667	294	6.5%
Critically Dry Year Average	3,421	3,456	3,516	3,567	3,618	3,669	3,717	3,757	3,796	3,811	3,839	3,868	3,868	448	13.1%
Minimum Annual	2,206	2,218	2,265	2,326	2,412	2,534	2,654	2,718	2,734	2,749	2,777	2,806	2,806	600	27.2%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC234	NC235	NC236	NC237	NC238	NC239	NC240	NC241	NC242	NC243	NC244	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,788	3,831	3,857	3,872	3,882	3,892	3,898	3,903	3,908	3,913	3,917	3,917	143	3.8%
1928-34 Dry Period Average	3,249	3,260	3,293	3,315	3,332	3,349	3,367	3,384	3,386	3,386	3,386	3,386	3,386	137	4.2%
Dry Year Average	3,484	3,512	3,611	3,664	3,693	3,701	3,709	3,719	3,734	3,748	3,752	3,752	3,752	269	7.7%
Critically Dry Year Average	2,942	2,956	2,992	3,017	3,054	3,097	3,139	3,168	3,180	3,191	3,207	3,219	3,219	277	9.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,944	6,019	6,058	6,077	6,095	6,111	6,124	6,132	6,138	6,143	6,148	6,148	227	3.8%
1928-34 Dry Period Average	3,918	3,960	4,047	4,111	4,157	4,206	4,254	4,300	4,311	4,311	4,311	4,311	4,311	393	10.0%
Dry Year Average	6,374	6,427	6,559	6,620	6,646	6,668	6,686	6,692	6,693	6,695	6,695	6,688	6,695	322	6.0%
Critically Dry Year Average	3,421	3,469	3,570	3,656	3,730	3,806	3,878	3,943	3,991	4,027	4,063	4,101	4,101	680	19.9%
Minimum Annual	2,206	2,224	2,296	2,439	2,618	2,780	2,831	2,859	2,933	3,069	3,089	3,089	3,089	883	40.0%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC245	NC246	NC247	NC248	NC249	NC250	NC251	NC252	NC253	NC254	NC255	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,952	6,035	6,070	6,093	6,115	6,134	6,147	6,159	6,166	6,173	6,177	6,177	256	4.3%
1928-34 Dry Period Average	3,918	3,970	4,081	4,170	4,233	4,296	4,356	4,415	4,450	4,450	4,450	4,450	4,450	532	13.6%
Dry Year Average	6,374	6,443	6,584	6,626	6,654	6,676	6,689	6,695	6,699	6,699	6,699	6,693	6,699	326	6.1%
Critically Dry Year Average	3,421	3,481	3,632	3,756	3,854	3,958	4,055	4,131	4,194	4,244	4,291	4,323	4,323	902	26.4%
Minimum Annual	2,206	2,231	2,326	2,559	2,797	2,942	3,134	3,186	3,222	3,222	3,222	3,222	3,222	1,016	46.1%

NC_RV02.XLS Results Tbl

Table NC-7

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 25%

Run Identifiers													Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,841	4,017	4,106	4,153	4,184	4,206	4,225	4,243	4,262	4,275	4,283	4,283	509	13.5%
1928-34 Dry Period Average	3,249	3,291	3,375	3,426	3,476	3,527	3,578	3,571	3,571	3,571	3,571	3,571	3,576	327	10.1%
Dry Year Average	3,484	3,574	3,832	3,966	4,124	4,178	4,230	4,268	4,295	4,302	4,334	4,362	4,362	878	25.2%
Critically Dry Year Average	2,942	2,989	3,035	3,124	3,222	3,316	3,382	3,445	3,507	3,568	3,580	3,572	3,572	630	21.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,906	5,943	5,967	5,983	5,995	6,005	6,015	6,023	6,029	6,035	6,039	6,039	118	2.0%
1928-34 Dry Period Average	3,918	3,893	3,916	3,932	3,947	3,963	3,979	3,989	3,989	3,989	3,989	3,989	3,989	71	1.8%
Dry Year Average	5,374	5,359	5,420	5,449	5,478	5,498	5,518	5,544	5,559	5,570	5,581	5,588	5,588	214	4.0%
Critically Dry Year Average	3,421	3,383	3,416	3,435	3,454	3,476	3,497	3,514	3,525	3,543	3,555	3,568	3,568	147	4.3%
Minimum Annual	2,206	2,212	2,234	2,260	2,295	2,325	2,357	2,389	2,420	2,473	2,533	2,593	2,593	387	17.5%

Facilities Allocation Factor = 50%

Run Identifiers													Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,819	3,952	4,029	4,078	4,110	4,132	4,141	4,152	4,164	4,176	4,188	4,188	414	11.0%
1928-34 Dry Period Average	3,249	3,277	3,337	3,370	3,404	3,438	3,473	3,456	3,456	3,456	3,456	3,456	3,473	224	6.9%
Dry Year Average	3,484	3,544	3,714	3,826	3,921	4,013	4,072	4,095	4,124	4,149	4,173	4,198	4,198	714	20.5%
Critically Dry Year Average	2,942	2,980	2,998	3,044	3,110	3,176	3,212	3,224	3,245	3,285	3,326	3,367	3,367	425	14.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,919	5,978	6,011	6,033	6,052	6,065	6,074	6,079	6,084	6,089	6,095	6,095	174	2.9%
1928-34 Dry Period Average	3,918	3,904	3,946	3,977	4,006	4,039	4,070	4,094	4,094	4,094	4,094	4,094	4,094	176	4.5%
Dry Year Average	5,374	5,361	5,482	5,518	5,550	5,587	5,611	5,618	5,627	5,630	5,631	5,633	5,633	259	4.8%
Critically Dry Year Average	3,421	3,404	3,458	3,505	3,555	3,605	3,650	3,686	3,705	3,729	3,757	3,784	3,784	363	10.6%
Minimum Annual	2,206	2,218	2,265	2,324	2,386	2,495	2,584	2,672	2,679	2,700	2,722	2,753	2,753	547	24.8%

Facilities Allocation Factor = 75%

Run Identifiers													Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,796	3,870	3,932	3,972	4,004	4,026	4,041	4,054	4,065	4,071	4,078	4,078	304	8.1%
1928-34 Dry Period Average	3,249	3,263	3,293	3,311	3,328	3,345	3,362	3,335	3,335	3,335	3,335	3,335	3,362	113	3.5%
Dry Year Average	3,484	3,514	3,605	3,656	3,704	3,753	3,804	3,848	3,886	3,930	3,951	3,971	3,971	487	14.0%
Critically Dry Year Average	2,942	2,951	2,969	2,980	3,001	3,026	3,046	3,040	3,051	3,063	3,074	3,085	3,085	143	4.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,929	6,000	6,037	6,058	6,076	6,091	6,104	6,111	6,118	6,125	6,131	6,131	210	3.5%
1928-34 Dry Period Average	3,918	3,913	3,975	4,020	4,067	4,115	4,162	4,205	4,205	4,205	4,205	4,205	4,205	287	7.3%
Dry Year Average	5,374	5,399	5,519	5,574	5,602	5,625	5,639	5,645	5,646	5,653	5,657	5,657	5,657	283	5.3%
Critically Dry Year Average	3,421	3,413	3,503	3,587	3,660	3,734	3,800	3,860	3,902	3,941	3,978	4,015	4,015	594	17.4%
Minimum Annual	2,206	2,224	2,294	2,410	2,577	2,746	2,775	2,815	2,875	2,957	3,058	3,058	3,058	851	38.6%

Facilities Allocation Factor = 100%

Run Identifiers													Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,936	6,015	6,051	6,074	6,095	6,114	6,128	6,137	6,144	6,152	6,157	6,157	236	4.0%
1928-34 Dry Period Average	3,918	3,922	4,004	4,066	4,126	4,192	4,253	4,314	4,326	4,326	4,326	4,326	4,326	408	10.4%
Dry Year Average	5,374	5,414	5,551	5,606	5,633	5,656	5,666	5,668	5,669	5,669	5,669	5,669	5,669	295	5.5%
Critically Dry Year Average	3,421	3,424	3,563	3,662	3,758	3,861	3,961	4,045	4,100	4,148	4,197	4,232	4,232	811	23.7%
Minimum Annual	2,206	2,230	2,328	2,527	2,767	2,851	2,944	3,103	3,118	3,118	3,118	3,118	3,118	912	41.3%

Table NC-6

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Run Identifiers	Base 1	NC403	NC402	NC403	NC404	NC405	NC406	NC407	NC408	NC409	NC410	NC411	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,825	3,911	3,941	3,958	3,963	3,967	3,967	3,967	3,967	3,967	3,967	3,967	193	5.1%
1928-34 Dry Period Average	3,249	3,289	3,415	3,497	3,555	3,608	3,651	3,651	3,651	3,651	3,651	3,651	3,651	403	12.4%
Dry Year Average	3,484	3,587	3,744	3,766	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	284	8.2%
Critically Dry Year Average	2,942	3,000	3,211	3,351	3,457	3,492	3,519	3,519	3,519	3,519	3,519	3,519	3,519	577	19.6%
Minimum Annual	2,410	2,410	2,575	2,862	2,976	3,231	3,231	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,927	5,926	5,926	5,925	5,925	5,925	5,925	5,925	5,925	5,925	5,925	5,927	6	0.1%
1928-34 Dry Period Average	3,918	3,936	3,934	3,929	3,929	3,929	3,929	3,929	3,929	3,929	3,929	3,929	3,936	18	0.5%
Dry Year Average	5,374	5,390	5,390	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,387	5,390	17	0.3%
Critically Dry Year Average	3,421	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	12	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	NC412	NC413	NC414	NC415	NC416	NC417	NC418	NC419	NC420	NC421	NC422	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,813	3,891	3,921	3,938	3,950	3,958	3,963	3,967	3,967	3,967	3,967	3,967	193	5.1%
1928-34 Dry Period Average	3,249	3,279	3,374	3,437	3,483	3,528	3,569	3,610	3,648	3,651	3,651	3,651	3,651	403	12.4%
Dry Year Average	3,484	3,564	3,720	3,754	3,767	3,767	3,767	3,767	3,767	3,767	3,767	3,767	3,767	283	8.1%
Critically Dry Year Average	2,942	2,985	3,129	3,248	3,330	3,409	3,461	3,493	3,517	3,517	3,516	3,516	3,517	575	19.6%
Minimum Annual	2,410	2,410	2,536	2,632	2,821	2,877	3,072	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,950	6,010	6,041	6,058	6,073	6,083	6,094	6,103	6,111	6,115	6,120	6,120	196	3.4%
1928-34 Dry Period Average	3,918	3,950	3,969	4,005	4,022	4,039	4,056	4,073	4,090	4,107	4,079	4,086	4,107	189	4.8%
Dry Year Average	5,374	5,416	5,500	5,541	5,560	5,576	5,590	5,597	5,604	5,611	5,620	5,627	5,627	253	4.7%
Critically Dry Year Average	3,421	3,444	3,473	3,499	3,532	3,576	3,603	3,634	3,665	3,696	3,699	3,711	3,711	290	8.5%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,267	2,387	2,508	2,581	2,581	2,581	2,581	2,581	375	17.0%

Facilities Allocation Factor = 60%

Run Identifiers	Base 1	NC423	NC424	NC425	NC426	NC427	NC428	NC429	NC430	NC431	NC432	NC433	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,801	3,866	3,892	3,911	3,925	3,935	3,941	3,946	3,951	3,954	3,955	3,955	181	4.8%
1928-34 Dry Period Average	3,249	3,289	3,334	3,376	3,410	3,440	3,471	3,502	3,531	3,555	3,556	3,555	3,556	307	9.4%
Dry Year Average	3,484	3,538	3,678	3,720	3,744	3,767	3,767	3,767	3,767	3,767	3,767	3,764	3,767	283	8.1%
Critically Dry Year Average	2,942	2,970	3,047	3,135	3,206	3,253	3,312	3,351	3,386	3,419	3,437	3,445	3,445	504	17.1%
Minimum Annual	2,410	2,410	2,425	2,459	2,469	2,613	2,817	2,817	2,836	3,003	3,003	3,003	3,003	593	24.6%
Ag & Urban Benefits															
71-Year Average	5,921	5,952	6,056	6,096	6,122	6,143	6,156	6,171	6,182	6,185	6,190	6,196	6,196	275	4.7%
1928-34 Dry Period Average	3,918	3,964	4,031	4,068	4,101	4,134	4,168	4,202	4,224	4,194	4,194	4,194	4,224	306	7.8%
Dry Year Average	5,374	5,438	5,574	5,630	5,647	5,662	5,669	5,670	5,679	5,680	5,687	5,701	5,701	327	6.1%
Critically Dry Year Average	3,421	3,455	3,516	3,595	3,674	3,759	3,835	3,897	3,938	3,959	3,960	4,002	4,002	581	17.0%
Minimum Annual	2,206	2,206	2,206	2,258	2,493	2,628	2,628	2,628	2,628	2,629	2,629	2,630	2,630	424	19.2%

Facilities Allocation Factor = 70%

Run Identifiers	Base 1	NC434	NC435	NC436	NC437	NC438	NC439	NC440	NC441	NC442	NC443	NC444	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,788	3,827	3,855	3,870	3,881	3,890	3,898	3,903	3,908	3,913	3,916	3,916	142	3.8%
1928-34 Dry Period Average	3,249	3,259	3,292	3,314	3,331	3,348	3,365	3,382	3,384	3,384	3,384	3,384	3,384	135	4.2%
Dry Year Average	3,484	3,512	3,598	3,657	3,688	3,700	3,708	3,719	3,733	3,748	3,750	3,750	3,750	266	7.6%
Critically Dry Year Average	2,942	2,955	2,980	3,016	3,063	3,096	3,138	3,167	3,179	3,189	3,208	3,218	3,218	276	9.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,965	6,088	6,137	6,161	6,182	6,200	6,214	6,223	6,232	6,240	6,245	6,245	324	5.5%
1928-34 Dry Period Average	3,918	3,977	4,072	4,128	4,178	4,227	4,277	4,316	4,314	4,314	4,314	4,314	4,316	398	10.1%
Dry Year Average	5,374	5,457	5,621	5,669	5,680	5,685	5,725	5,753	5,757	5,759	5,752	5,751	5,759	385	7.2%
Critically Dry Year Average	3,421	3,468	3,582	3,710	3,832	3,953	4,014	4,056	4,112	4,166	4,187	4,216	4,216	795	23.2%
Minimum Annual	2,206	2,206	2,206	2,549	2,675	2,675	2,675	2,675	2,675	2,675	2,939	3,009	3,009	802	36.4%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC445	NC446	NC447	NC448	NC449	NC450	NC451	NC452	NC453	NC454	NC455	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,995	6,113	6,158	6,183	6,209	6,233	6,250	6,262	6,268	6,272	6,278	6,278	357	6.0%
1928-34 Dry Period Average	3,918	3,988	4,111	4,190	4,256	4,322	4,385	4,433	4,433	4,433	4,433	4,433	4,433	515	13.1%
Dry Year Average	5,374	5,473	5,645	5,673	5,684	5,753	5,774	5,774	5,774	5,774	5,768	5,767	5,774	401	7.5%
Critically Dry Year Average	3,421	3,462	3,668	3,853	4,003	4,070	4,186	4,290	4,329	4,366	4,402	4,440	4,440	1,019	29.8%
Minimum Annual	2,206	2,206	2,312	2,724	2,724	2,724	2,778	3,009	3,009	3,009	3,009	3,009	3,009	802	36.4%

Table NC-9

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Alt 2	NC312	NC313	NC314	NC315	NC316	NC317	NC318	NC319	NC320	NC321	NC322	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,842	4,035	4,127	4,176	4,209	4,237	4,262	4,282	4,294	4,305	4,316	4,316	548	14.5%
1928-34 Dry Period Average	3,195	3,237	3,334	3,401	3,469	3,536	3,569	3,569	3,569	3,569	3,569	3,569	3,569	374	11.7%
Dry Year Average	3,456	3,550	3,861	4,043	4,156	4,203	4,266	4,320	4,345	4,371	4,396	4,417	4,417	961	27.8%
Critically Dry Year Average	2,938	2,959	3,026	3,156	3,286	3,367	3,473	3,556	3,609	3,609	3,629	3,666	3,666	728	24.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,153	6,151	6,148	6,145	6,143	6,142	6,141	6,141	6,139	6,139	6,138	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,033	0	0.0%
Dry Year Average	5,635	5,594	5,587	5,586	5,583	5,579	5,579	5,578	5,577	5,577	5,577	5,577	5,635	0	0.0%
Critically Dry Year Average	3,480	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,480	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Alt 2	NC312	NC313	NC314	NC315	NC316	NC317	NC318	NC319	NC320	NC321	NC322	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,825	3,977	4,054	4,099	4,125	4,147	4,165	4,184	4,202	4,217	4,226	4,226	458	12.1%
1928-34 Dry Period Average	3,195	3,226	3,305	3,355	3,406	3,457	3,483	3,483	3,483	3,483	3,483	3,483	3,483	289	9.0%
Dry Year Average	3,456	3,527	3,749	3,864	4,016	4,065	4,105	4,141	4,183	4,220	4,234	4,243	4,243	787	22.8%
Critically Dry Year Average	2,938	2,953	3,004	3,097	3,196	3,260	3,309	3,380	3,421	3,483	3,526	3,540	3,540	602	20.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,176	6,239	6,281	6,306	6,316	6,319	6,329	6,333	6,340	6,347	6,355	6,355	186	3.0%
1928-34 Dry Period Average	4,033	4,034	4,060	4,077	4,094	4,111	4,094	4,094	4,094	4,094	4,094	4,094	4,111	78	1.9%
Dry Year Average	5,635	5,619	5,675	5,705	5,737	5,751	5,770	5,798	5,809	5,826	5,846	5,860	5,860	225	4.0%
Critically Dry Year Average	3,480	3,473	3,486	3,497	3,509	3,527	3,531	3,542	3,553	3,564	3,575	3,585	3,585	106	3.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,215	2,335	2,456	2,547	2,547	363	16.6%

Facilities Allocation Factor = 50%

Run Identifiers	Alt 2	NC323	NC324	NC325	NC326	NC327	NC328	NC329	NC330	NC331	NC332	NC333	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,806	3,920	3,983	4,022	4,047	4,064	4,077	4,089	4,102	4,115	4,127	4,127	359	9.5%
1928-34 Dry Period Average	3,195	3,216	3,269	3,302	3,336	3,370	3,379	3,379	3,379	3,379	3,379	3,379	3,379	184	5.8%
Dry Year Average	3,456	3,504	3,645	3,741	3,820	3,889	3,941	3,965	3,993	4,020	4,048	4,071	4,071	614	17.8%
Critically Dry Year Average	2,938	2,948	2,977	3,028	3,088	3,132	3,160	3,182	3,203	3,225	3,245	3,284	3,284	345	11.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,197	6,300	6,359	6,385	6,405	6,423	6,438	6,448	6,459	6,471	6,483	6,483	314	5.1%
1928-34 Dry Period Average	4,033	4,044	4,087	4,121	4,155	4,189	4,189	4,189	4,189	4,189	4,189	4,189	4,189	156	3.9%
Dry Year Average	5,635	5,642	5,755	5,811	5,862	5,925	5,969	6,002	6,022	6,036	6,055	6,072	6,072	436	7.7%
Critically Dry Year Average	3,480	3,478	3,503	3,546	3,611	3,654	3,676	3,707	3,750	3,791	3,825	3,865	3,865	386	11.1%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,401	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 75%

Run Identifiers	Alt 2	NC334	NC335	NC336	NC337	NC338	NC339	NC340	NC341	NC342	NC343	NC344	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,788	3,850	3,902	3,934	3,961	3,981	3,973	3,981	3,987	3,994	4,002	4,002	234	6.2%
1928-34 Dry Period Average	3,195	3,205	3,232	3,250	3,266	3,284	3,269	3,269	3,269	3,269	3,269	3,284	3,284	89	2.8%
Dry Year Average	3,456	3,481	3,547	3,589	3,634	3,664	3,675	3,697	3,723	3,751	3,780	3,808	3,808	352	10.2%
Critically Dry Year Average	2,938	2,943	2,956	2,968	2,980	3,011	3,013	3,024	3,035	3,047	3,058	3,069	3,069	131	4.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,216	6,346	6,397	6,433	6,460	6,480	6,496	6,510	6,524	6,534	6,543	6,543	374	6.1%
1928-34 Dry Period Average	4,033	4,053	4,113	4,162	4,212	4,261	4,284	4,284	4,284	4,284	4,284	4,284	4,284	250	6.2%
Dry Year Average	5,635	5,662	5,826	5,929	6,000	6,019	6,045	6,058	6,069	6,096	6,105	6,107	6,107	472	8.4%
Critically Dry Year Average	3,480	3,483	3,532	3,621	3,724	3,827	3,903	3,965	4,013	4,045	4,089	4,117	4,117	638	18.3%
Minimum Annual	2,184	2,184	2,184	2,242	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 100%

Run Identifiers	Alt 2	NC345	NC346	NC347	NC348	NC349	NC350	NC351	NC352	NC353	NC354	NC355	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,230	6,376	6,431	6,471	6,502	6,525	6,538	6,549	6,556	6,563	6,569	6,569	400	6.5%
1928-34 Dry Period Average	4,033	4,060	4,140	4,204	4,269	4,336	4,382	4,382	4,382	4,382	4,382	4,382	4,382	349	8.6%
Dry Year Average	5,635	5,680	5,866	6,020	6,050	6,094	6,125	6,144	6,142	6,142	6,142	6,142	6,144	508	9.0%
Critically Dry Year Average	3,480	3,488	3,576	3,717	3,885	3,964	4,060	4,113	4,163	4,201	4,238	4,276	4,276	796	22.9%
Minimum Annual	2,184	2,184	2,184	2,477	2,547	2,547	2,547	2,547	2,547	2,547	2,893	3,037	3,037	853	39.0%

Table NC-10

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low Sacramento River Flow Event Target

(Values in thousands of acre-feet)

Run Identifiers	Base 2	NC611	NC612	NC613	NC614	NC615	NC616	NC617	NC618	NC619	NC620	NC621	NC622	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000				
Environmental Benefits																
71-Year Average	3,768	3,816	3,901	3,930	3,945	3,955	3,961	3,966	3,966	3,966	3,966	3,966	3,966	197	5.2%
1928-34 Dry Period Average	3,195	3,232	3,329	3,363	3,452	3,507	3,561	3,612	3,612	3,612	3,612	3,612	3,612	417	13.0%
Dry Year Average	3,456	3,562	3,727	3,756	3,756	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	301	8.7%
Critically Dry Year Average	2,938	2,964	3,159	3,262	3,362	3,447	3,481	3,513	3,513	3,513	3,513	3,513	3,513	575	19.6%
Minimum Annual	2,410	2,410	2,589	2,685	2,770	3,008	3,231	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits																
71-Year Average	6,169	6,125	6,122	6,121	6,118	6,118	6,118	6,118	6,116	6,116	6,116	6,116	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,021	4,021	4,021	4,021	4,021	4,021	4,021	4,021	4,021	4,021	4,021	4,033	0	0.0%
Dry Year Average	5,635	5,603	5,591	5,590	5,590	5,589	5,588	5,588	5,588	5,587	5,587	5,587	5,635	0	0.0%
Critically Dry Year Average	3,480	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,496	3,498	18	0.5%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Run Identifiers	Base 2	NC612	NC613	NC614	NC615	NC616	NC617	NC618	NC619	NC620	NC621	NC622	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,805	3,864	3,911	3,929	3,940	3,948	3,956	3,960	3,961	3,961	3,961	3,961	193	5.1%
1928-34 Dry Period Average	3,195	3,223	3,297	3,346	3,391	3,437	3,480	3,520	3,561	3,573	3,573	3,573	3,573	378	11.9%
Dry Year Average	3,456	3,536	3,712	3,736	3,756	3,756	3,756	3,756	3,756	3,756	3,756	3,756	3,756	300	8.7%
Critically Dry Year Average	2,938	2,972	3,085	3,200	3,278	3,348	3,402	3,451	3,478	3,486	3,486	3,486	3,486	548	18.6%
Minimum Annual	2,410	2,410	2,500	2,500	2,691	2,753	2,822	3,101	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	6,169	6,144	6,187	6,213	6,227	6,239	6,248	6,258	6,266	6,271	6,276	6,280	6,280	111	1.8%
1928-34 Dry Period Average	4,033	4,033	4,056	4,076	4,092	4,109	4,126	4,143	4,146	4,131	4,131	4,131	4,146	113	2.8%
Dry Year Average	5,635	5,626	5,694	5,736	5,768	5,799	5,824	5,844	5,857	5,865	5,872	5,872	5,872	236	4.2%
Critically Dry Year Average	3,480	3,506	3,530	3,552	3,577	3,589	3,622	3,646	3,664	3,673	3,689	3,705	3,705	225	6.5%
Minimum Annual	2,184	2,185	2,204	2,229	2,256	2,316	2,401	2,485	2,570	2,574	2,577	2,579	2,579	395	18.1%

Run Identifiers	Base 2	NC623	NC624	NC625	NC626	NC627	NC628	NC629	NC630	NC631	NC632	NC633	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,793	3,861	3,887	3,904	3,918	3,927	3,932	3,935	3,938	3,941	3,944	3,944	176	4.7%
1928-34 Dry Period Average	3,195	3,214	3,265	3,298	3,331	3,362	3,392	3,423	3,426	3,426	3,426	3,426	3,426	232	7.3%
Dry Year Average	3,456	3,510	3,671	3,707	3,730	3,754	3,754	3,754	3,754	3,754	3,754	3,754	3,754	298	8.6%
Critically Dry Year Average	2,938	2,960	3,018	3,099	3,170	3,214	3,266	3,301	3,322	3,341	3,359	3,377	3,377	439	14.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,537	2,736	2,736	2,736	2,736	2,736	2,736	2,736	326	13.5%
Ag & Urban Benefits															
71-Year Average	6,169	6,158	6,226	6,256	6,281	6,299	6,313	6,323	6,330	6,336	6,342	6,345	6,345	176	2.9%
1928-34 Dry Period Average	4,033	4,043	4,093	4,126	4,157	4,190	4,224	4,239	4,235	4,235	4,235	4,235	4,239	206	5.1%
Dry Year Average	5,635	5,649	5,777	5,852	5,899	5,928	5,949	5,958	5,961	5,964	5,959	5,959	5,959	333	6.9%
Critically Dry Year Average	3,480	3,516	3,566	3,616	3,677	3,731	3,779	3,817	3,846	3,877	3,904	3,937	3,937	458	13.2%
Minimum Annual	2,184	2,190	2,228	2,306	2,475	2,593	2,596	2,801	2,805	2,810	2,640	2,886	2,886	502	23.0%

Run Identifiers	Base 2	NC634	NC635	NC636	NC637	NC638	NC639	NC640	NC641	NC642	NC643	NC644	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,781	3,823	3,852	3,867	3,876	3,885	3,891	3,895	3,900	3,904	3,907	3,907	139	3.7%
1928-34 Dry Period Average	3,195	3,204	3,230	3,247	3,264	3,281	3,298	3,304	3,304	3,304	3,304	3,304	3,304	109	3.4%
Dry Year Average	3,456	3,483	3,585	3,644	3,674	3,681	3,689	3,699	3,714	3,728	3,734	3,734	3,734	278	8.0%
Critically Dry Year Average	2,938	2,948	2,974	3,000	3,036	3,074	3,107	3,130	3,141	3,151	3,158	3,168	3,168	230	7.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,171	6,252	6,295	6,318	6,335	6,349	6,360	6,368	6,376	6,382	6,384	6,384	215	3.5%
1928-34 Dry Period Average	4,033	4,052	4,125	4,172	4,221	4,270	4,320	4,335	4,335	4,335	4,335	4,335	4,335	302	7.5%
Dry Year Average	5,635	5,670	5,842	5,926	5,959	5,973	5,985	5,997	5,996	5,995	5,994	5,995	5,998	362	6.4%
Critically Dry Year Average	3,480	3,526	3,611	3,704	3,796	3,874	3,943	3,993	4,041	4,090	4,131	4,157	4,157	678	19.5%
Minimum Annual	2,184	2,195	2,257	2,512	2,646	2,654	2,661	2,706	2,773	2,866	3,045	3,045	3,045	861	39.4%

Run Identifiers	Base 2	NC645	NC646	NC647	NC648	NC649	NC650	NC651	NC652	NC653	NC654	NC655	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,180	6,270	6,313	6,335	6,356	6,373	6,386	6,393	6,398	6,402	6,405	6,405	236	3.8%
1928-34 Dry Period Average	4,033	4,061	4,156	4,220	4,285	4,350	4,409	4,438	4,438	4,438	4,438	4,438	4,438	405	10.0%
Dry Year Average	5,635	5,668	5,888	5,941	5,961	5,962	5,967	5,969	5,967	5,966	5,965	5,974	5,969	353	6.3%
Critically Dry Year Average	3,480	3,536	3,665	3,795	3,916	4,013	4,108	4,186	4,236	4,271	4,305	4,340	4,340	861	24.7%
Minimum Annual	2,184	2,199	2,347	2,679	2,706	2,758	2,852	3,088	3,088	3,088	3,088	3,088	3,088	904	41.4%

Table NC-11

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	NC710	NC711	NC712	NC713	NC714	NC715	NC716	NC717	NC718	NC719	NC720	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,845	4,043	4,135	4,184	4,217	4,245	4,270	4,289	4,300	4,311	4,322	4,322	554	14.7%
1928-34 Dry Period Average	3,195	3,248	3,345	3,412	3,480	3,547	3,582	3,582	3,582	3,582	3,582	3,582	3,582	387	12.1%
Dry Year Average	3,456	3,561	3,861	4,073	4,174	4,227	4,293	4,347	4,363	4,384	4,417	4,423	4,423	967	28.0%
Critically Dry Year Average	2,938	2,959	3,026	3,156	3,286	3,380	3,476	3,568	3,609	3,609	3,632	3,669	3,669	730	24.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,102	6,097	6,095	6,093	6,090	6,090	6,090	6,090	6,088	6,088	6,087	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,001	4,001	4,001	4,001	4,001	4,001	4,001	4,001	4,001	4,001	4,001	4,033	0	0.0%
Dry Year Average	5,635	5,564	5,537	5,537	5,537	5,532	5,532	5,532	5,531	5,531	5,531	5,531	5,635	0	0.0%
Critically Dry Year Average	3,480	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,480	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC721	NC722	NC723	NC724	NC725	NC726	NC727	NC728	NC729	NC730	NC731	NC732	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000				
Environmental Benefits																
71-Year Average	3,768	3,827	3,987	4,068	4,113	4,140	4,161	4,179	4,196	4,217	4,228	4,235	4,235	467	12.4%
1928-34 Dry Period Average	3,195	3,235	3,313	3,364	3,415	3,466	3,485	3,485	3,485	3,485	3,485	3,485	3,485	291	9.1%
Dry Year Average	3,456	3,535	3,770	3,919	4,038	4,084	4,126	4,157	4,196	4,223	4,230	4,248	4,248	792	22.9%
Critically Dry Year Average	2,938	2,953	3,004	3,091	3,190	3,255	3,299	3,358	3,419	3,480	3,505	3,498	3,505	567	19.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits																
71-Year Average	6,169	6,122	6,161	6,185	6,202	6,211	6,221	6,230	6,238	6,244	6,249	6,254	6,254	85	1.4%
1928-34 Dry Period Average	4,033	4,014	4,034	4,051	4,068	4,084	4,099	4,099	4,099	4,099	4,099	4,099	4,099	66	1.6%
Dry Year Average	5,635	5,581	5,636	5,664	5,692	5,720	5,748	5,779	5,801	5,819	5,834	5,843	5,843	207	3.7%
Critically Dry Year Average	3,480	3,468	3,487	3,508	3,532	3,555	3,576	3,587	3,601	3,617	3,632	3,647	3,647	167	4.8%
Minimum Annual	2,184	2,185	2,204	2,229	2,253	2,278	2,305	2,357	2,442	2,527	2,555	2,557	2,557	373	17.1%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	NC733	NC734	NC735	NC736	NC737	NC738	NC739	NC740	NC741	NC742	NC743	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,808	3,927	4,000	4,043	4,069	4,084	4,094	4,107	4,119	4,131	4,143	4,143	375	9.9%
1928-34 Dry Period Average	3,195	3,221	3,275	3,308	3,342	3,376	3,378	3,377	3,377	3,377	3,377	3,377	3,379	184	5.8%
Dry Year Average	3,456	3,509	3,680	3,764	3,850	3,932	3,974	3,991	4,019	4,047	4,067	4,082	4,082	626	18.1%
Critically Dry Year Average	2,938	2,948	2,976	3,020	3,086	3,125	3,149	3,170	3,191	3,213	3,245	3,283	3,283	345	11.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,137	6,197	6,232	6,255	6,274	6,290	6,301	6,308	6,316	6,321	6,326	6,326	157	2.5%
1928-34 Dry Period Average	4,033	4,023	4,063	4,096	4,129	4,160	4,193	4,194	4,194	4,194	4,194	4,194	4,194	161	4.0%
Dry Year Average	5,635	5,605	5,707	5,772	5,818	5,863	5,890	5,898	5,905	5,917	5,921	5,924	5,924	289	5.1%
Critically Dry Year Average	3,480	3,475	3,516	3,569	3,632	3,682	3,730	3,761	3,792	3,818	3,848	3,879	3,879	399	11.5%
Minimum Annual	2,184	2,190	2,228	2,278	2,364	2,560	2,571	2,575	2,579	2,582	2,584	2,600	2,600	416	19.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	NC744	NC745	NC746	NC747	NC748	NC749	NC750	NC751	NC752	NC753	NC754	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,788	3,853	3,912	3,948	3,971	3,989	4,003	4,011	4,017	4,021	4,028	4,028	260	6.9%
1928-34 Dry Period Average	3,195	3,208	3,236	3,252	3,289	3,266	3,272	3,268	3,268	3,268	3,268	3,268	3,286	92	2.9%
Dry Year Average	3,456	3,483	3,567	3,608	3,651	3,701	3,745	3,780	3,793	3,812	3,827	3,852	3,852	396	11.4%
Critically Dry Year Average	2,938	2,943	2,956	2,968	2,989	3,011	3,013	3,022	3,033	3,045	3,056	3,067	3,067	129	4.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,149	6,222	6,263	6,291	6,308	6,322	6,331	6,339	6,348	6,356	6,361	6,361	191	3.1%
1928-34 Dry Period Average	4,033	4,032	4,091	4,137	4,187	4,236	4,285	4,289	4,289	4,289	4,289	4,289	4,289	255	6.3%
Dry Year Average	5,635	5,628	5,774	5,854	5,894	5,909	5,918	5,918	5,918	5,924	5,927	5,927	5,927	292	5.2%
Critically Dry Year Average	3,480	3,482	3,557	3,649	3,742	3,822	3,882	3,938	3,987	4,036	4,084	4,115	4,115	636	18.3%
Minimum Annual	2,184	2,194	2,251	2,434	2,595	2,600	2,605	2,643	2,712	2,783	2,939	3,045	3,045	861	39.4%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC755	NC756	NC757	NC758	NC759	NC760	NC761	NC762	NC763	NC764	NC765	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,157	6,241	6,286	6,310	6,330	6,347	6,359	6,368	6,373	6,379	6,384	6,384	215	3.5%
1928-34 Dry Period Average	4,033	4,041	4,119	4,182	4,247	4,313	4,374	4,386	4,386	4,386	4,386	4,386	4,386	353	8.8%
Dry Year Average	5,635	5,646	5,826	5,895	5,916	5,935	5,953	5,955	5,954	5,954	5,953	5,952	5,955	319	5.7%
Critically Dry Year Average	3,480	3,488	3,604	3,731	3,852	3,955	4,033	4,105	4,152	4,197	4,232	4,266	4,266	787	22.6%
Minimum Annual	2,184	2,199	2,276	2,600	2,629	2,638	2,720	2,826	3,065	3,065	3,065	3,065	3,065	881	40.3%

Table NC-12

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	NC611	NC612	NC613	NC614	NC615	NC616	NC617	NC618	NC619	NC620	NC621	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,815	3,896	3,928	3,944	3,954	3,960	3,965	3,966	3,966	3,966	3,966	3,966	197	5.2%
1928-34 Dry Period Average	3,195	3,222	3,319	3,383	3,442	3,497	3,562	3,606	3,612	3,612	3,612	3,612	3,612	417	13.0%
Dry Year Average	3,456	3,562	3,713	3,756	3,756	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	301	8.7%
Critically Dry Year Average	2,938	2,978	3,153	3,276	3,375	3,440	3,475	3,510	3,513	3,513	3,513	3,513	3,513	575	19.6%
Minimum Annual	2,410	2,410	2,599	2,685	2,899	2,936	3,176	3,231	3,231	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	6,169	6,177	6,175	6,175	6,172	6,172	6,171	6,171	6,170	6,170	6,170	6,169	6,177	8	0.1%
1928-34 Dry Period Average	4,033	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	10	0.2%
Dry Year Average	5,635	5,643	5,639	5,638	5,638	5,637	5,636	5,636	5,635	5,635	5,635	5,635	5,643	8	0.1%
Critically Dry Year Average	3,480	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	23	0.7%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC612	NC613	NC614	NC615	NC616	NC617	NC618	NC619	NC620	NC621	NC622	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,804	3,876	3,907	3,928	3,939	3,947	3,955	3,960	3,961	3,961	3,960	3,961	193	5.1%
1928-34 Dry Period Average	3,195	3,215	3,286	3,336	3,383	3,428	3,473	3,512	3,553	3,565	3,565	3,565	3,565	370	11.6%
Dry Year Average	3,456	3,536	3,696	3,729	3,756	3,755	3,756	3,756	3,756	3,756	3,756	3,756	3,756	300	8.7%
Critically Dry Year Average	2,938	2,967	3,080	3,195	3,272	3,342	3,396	3,448	3,476	3,484	3,483	3,481	3,484	545	18.6%
Minimum Annual	2,410	2,410	2,499	2,499	2,686	2,699	2,768	3,041	3,186	3,231	3,231	3,231	3,231	821	34.1%
Ag & Urban Benefits															
71-Year Average	6,169	6,198	6,263	6,313	6,345	6,360	6,371	6,381	6,388	6,395	6,402	6,404	6,404	235	3.8%
1928-34 Dry Period Average	4,033	4,054	4,086	4,103	4,120	4,138	4,155	4,172	4,150	4,134	4,134	4,134	4,172	138	3.4%
Dry Year Average	5,635	5,666	5,730	5,776	5,813	5,847	5,884	5,911	5,928	5,943	5,956	5,960	5,960	325	5.8%
Critically Dry Year Average	3,480	3,511	3,528	3,541	3,563	3,578	3,600	3,622	3,619	3,620	3,635	3,655	3,655	176	5.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,218	2,338	2,459	2,565	2,565	2,565	2,565	381	17.4%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	NC623	NC624	NC625	NC626	NC627	NC628	NC629	NC630	NC631	NC632	NC633	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,793	3,856	3,883	3,901	3,915	3,926	3,932	3,934	3,937	3,940	3,943	3,943	175	4.6%
1928-34 Dry Period Average	3,195	3,208	3,259	3,292	3,326	3,356	3,386	3,416	3,419	3,419	3,419	3,419	3,419	224	7.0%
Dry Year Average	3,456	3,510	3,656	3,698	3,721	3,753	3,754	3,754	3,754	3,754	3,754	3,754	3,754	297	8.6%
Critically Dry Year Average	2,938	2,957	3,014	3,095	3,186	3,209	3,261	3,298	3,316	3,336	3,352	3,370	3,370	432	14.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,532	2,699	2,699	2,699	2,699	2,699	2,699	2,699	289	12.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,219	6,331	6,368	6,415	6,435	6,452	6,463	6,475	6,486	6,495	6,507	6,507	338	5.5%
1928-34 Dry Period Average	4,033	4,064	4,117	4,151	4,184	4,218	4,251	4,241	4,237	4,237	4,237	4,237	4,251	218	5.4%
Dry Year Average	5,635	5,688	5,814	5,897	5,980	6,002	6,028	6,054	6,068	6,081	6,086	6,109	6,109	473	8.4%
Critically Dry Year Average	3,480	3,519	3,554	3,603	3,668	3,716	3,779	3,815	3,854	3,896	3,937	3,969	3,969	490	14.1%
Minimum Annual	2,184	2,184	2,184	2,184	2,326	2,566	2,582	2,582	2,582	2,582	2,582	2,582	2,582	398	18.2%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	NC634	NC635	NC636	NC637	NC638	NC639	NC640	NC641	NC642	NC643	NC644	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,781	3,820	3,847	3,862	3,871	3,879	3,886	3,892	3,899	3,902	3,905	3,905	137	3.6%
1928-34 Dry Period Average	3,195	3,202	3,227	3,244	3,261	3,279	3,295	3,301	3,301	3,301	3,301	3,301	3,301	106	3.3%
Dry Year Average	3,456	3,483	3,570	3,629	3,658	3,666	3,680	3,691	3,705	3,721	3,732	3,732	3,732	275	8.0%
Critically Dry Year Average	2,938	2,947	2,972	2,998	3,034	3,071	3,103	3,128	3,139	3,149	3,154	3,154	3,154	226	7.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,236	6,377	6,430	6,466	6,489	6,512	6,530	6,547	6,554	6,563	6,570	6,570	401	6.5%
1928-34 Dry Period Average	4,033	4,073	4,147	4,196	4,246	4,295	4,340	4,335	4,335	4,335	4,335	4,340	4,340	307	7.6%
Dry Year Average	5,635	5,710	5,893	6,010	6,063	6,083	6,123	6,146	6,169	6,177	6,179	6,179	6,179	544	9.7%
Critically Dry Year Average	3,480	3,527	3,589	3,682	3,790	3,896	3,977	4,038	4,070	4,107	4,133	4,160	4,160	681	19.6%
Minimum Annual	2,184	2,184	2,184	2,381	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	416	19.1%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC645	NC646	NC647	NC648	NC649	NC650	NC651	NC652	NC653	NC654	NC655	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,255	6,408	6,467	6,503	6,532	6,563	6,566	6,577	6,581	6,587	6,592	6,592	423	6.9%
1928-34 Dry Period Average	4,033	4,080	4,178	4,242	4,307	4,374	4,433	4,433	4,433	4,433	4,433	4,433	4,433	399	9.9%
Dry Year Average	5,635	5,731	5,967	6,068	6,095	6,146	6,190	6,190	6,186	6,179	6,179	6,179	6,190	556	9.8%
Critically Dry Year Average	3,480	3,535	3,641	3,796	3,963	4,054	4,107	4,186	4,224	4,262	4,300	4,337	4,337	857	24.6%
Minimum Annual	2,184	2,184	2,184	2,617	2,617	2,617	2,617	2,617	2,617	3,030	3,037	3,037	3,037	853	39.0%

Table NC-13

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC811	NC812	NC813	NC814	NC815	NC816	NC817	NC818	NC819	NC820	NC821	NC822	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000				
Environmental Benefits																
71-Year Average	3,774	3,814	3,933	4,016	4,057	4,087	4,112	4,137	4,159	4,177	4,194	4,212	4,212	4,212	438	11.6%
1928-34 Dry Period Average	3,249	3,252	3,316	3,383	3,406	3,406	3,406	3,406	3,406	3,406	3,406	3,406	3,406	3,406	157	4.8%
Dry Year Average	3,484	3,506	3,603	3,708	3,897	3,974	4,026	4,086	4,139	4,166	4,183	4,218	4,218	4,218	734	21.1%
Critically Dry Year Average	2,942	2,951	3,002	3,088	3,147	3,189	3,232	3,274	3,334	3,373	3,411	3,426	3,426	3,426	484	16.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits																
71-Year Average	5,921	5,912	5,912	5,912	5,911	5,911	5,911	5,911	5,911	5,910	5,910	5,910	5,921	0	0.0%	
1928-34 Dry Period Average	3,918	3,891	3,891	3,891	3,891	3,891	3,891	3,891	3,891	3,891	3,891	3,891	3,918	0	0.0%	
Dry Year Average	5,374	5,358	5,358	5,358	5,358	5,358	5,358	5,358	5,358	5,358	5,358	5,358	5,374	0	0.0%	
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%	
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%	

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	NC812	NC813	NC814	NC815	NC816	NC817	NC818	NC819	NC820	NC821	NC822	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,805	3,897	3,964	4,005	4,030	4,049	4,068	4,087	4,106	4,122	4,134	4,134	361	9.6%
1928-34 Dry Period Average	3,249	3,258	3,288	3,349	3,366	3,366	3,366	3,366	3,366	3,366	3,366	3,366	3,366	118	3.6%
Dry Year Average	3,484	3,500	3,566	3,685	3,801	3,883	3,928	3,958	4,011	4,061	4,091	4,111	4,111	627	18.0%
Critically Dry Year Average	2,942	2,949	2,987	3,052	3,096	3,129	3,160	3,192	3,225	3,265	3,315	3,338	3,338	396	13.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,925	5,960	5,981	5,991	6,001	6,008	6,016	6,024	6,031	6,039	6,042	6,042	121	2.0%
1928-34 Dry Period Average	3,918	3,894	3,908	3,925	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,925	7	0.2%
Dry Year Average	5,374	5,365	5,387	5,402	5,428	5,455	5,471	5,490	5,508	5,526	5,544	5,550	5,550	176	3.3%
Critically Dry Year Average	3,421	3,386	3,395	3,406	3,416	3,427	3,438	3,445	3,460	3,471	3,482	3,493	3,493	72	2.1%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,318	2,438	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	NC823	NC824	NC825	NC826	NC827	NC828	NC829	NC830	NC831	NC832	NC833	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,795	3,861	3,914	3,945	3,966	3,986	4,003	4,016	4,029	4,042	4,051	4,051	277	7.3%
1928-34 Dry Period Average	3,249	3,256	3,283	3,316	3,319	3,319	3,319	3,319	3,319	3,319	3,319	3,319	3,319	71	2.2%
Dry Year Average	3,484	3,495	3,524	3,589	3,655	3,719	3,782	3,832	3,861	3,890	3,918	3,929	3,929	445	12.8%
Critically Dry Year Average	2,942	2,946	2,966	3,010	3,034	3,056	3,078	3,100	3,122	3,143	3,165	3,186	3,186	244	8.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,937	5,985	6,017	6,037	6,057	6,070	6,083	6,095	6,106	6,117	6,126	6,126	205	3.5%
1928-34 Dry Period Average	3,918	3,898	3,924	3,958	3,971	3,971	3,971	3,971	3,971	3,971	3,971	3,971	3,971	53	1.4%
Dry Year Average	5,374	5,373	5,423	5,472	5,514	5,551	5,575	5,591	5,598	5,605	5,605	5,605	5,605	232	4.3%
Critically Dry Year Average	3,421	3,388	3,405	3,446	3,476	3,497	3,529	3,571	3,605	3,645	3,686	3,726	3,726	305	8.9%
Minimum Annual	2,206	2,206	2,206	2,206	2,387	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC834	NC835	NC836	NC837	NC838	NC839	NC840	NC841	NC842	NC843	NC844	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,784	3,820	3,855	3,878	3,894	3,908	3,918	3,928	3,938	3,947	3,955	3,955	181	4.8%
1928-34 Dry Period Average	3,249	3,252	3,266	3,284	3,267	3,267	3,267	3,267	3,267	3,267	3,267	3,267	3,264	35	1.1%
Dry Year Average	3,484	3,489	3,502	3,510	3,535	3,555	3,579	3,602	3,624	3,654	3,684	3,714	3,714	230	6.6%
Critically Dry Year Average	2,942	2,944	2,953	2,964	2,975	2,987	2,998	3,009	3,020	3,031	3,043	3,054	3,054	112	3.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,946	6,002	6,036	6,065	6,085	6,102	6,114	6,124	6,135	6,143	6,152	6,152	231	3.9%
1928-34 Dry Period Average	3,918	3,901	3,940	3,960	4,022	4,022	4,022	4,022	4,022	4,022	4,022	4,022	4,022	104	2.7%
Dry Year Average	5,374	5,379	5,464	5,526	5,564	5,578	5,581	5,581	5,587	5,611	5,630	5,639	5,639	266	4.9%
Critically Dry Year Average	3,421	3,391	3,428	3,491	3,561	3,614	3,675	3,737	3,792	3,823	3,828	3,851	3,851	430	12.6%
Minimum Annual	2,206	2,206	2,206	2,461	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC845	NC846	NC847	NC848	NC849	NC850	NC851	NC852	NC853	NC854	NC855	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,952	6,013	6,056	6,085	6,105	6,118	6,130	6,143	6,150	6,156	6,161	6,161	240	4.1%
1928-34 Dry Period Average	3,918	3,904	3,956	4,022	4,075	4,075	4,075	4,075	4,076	4,075	4,075	4,075	4,075	157	4.0%
Dry Year Average	5,374	5,388	5,494	5,561	5,582	5,582	5,582	5,610	5,633	5,633	5,633	5,633	5,633	266	4.8%
Critically Dry Year Average	3,421	3,393	3,452	3,536	3,654	3,736	3,818	3,880	3,865	3,902	3,939	3,977	3,977	556	16.2%
Minimum Annual	2,206	2,206	2,227	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,925	2,925	719	32.6%

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Table NC-14

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC1011	NC1012	NC1013	NC1014	NC1015	NC1016	NC1017	NC1018	NC1019	NC1020	NC1021	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,801	3,858	3,889	3,913	3,920	3,926	3,931	3,937	3,937	3,937	3,937	3,937	163	4.3%
1928-34 Dry Period Average	3,249	3,262	3,314	3,378	3,437	3,460	3,460	3,460	3,460	3,460	3,460	3,460	3,460	212	6.5%
Dry Year Average	3,484	3,526	3,657	3,707	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	273	7.8%
Critically Dry Year Average	2,942	2,951	3,018	3,124	3,186	3,237	3,272	3,307	3,341	3,341	3,341	3,341	3,341	399	13.6%
Minimum Annual	2,410	2,410	2,410	2,410	2,579	2,698	2,698	2,698	2,698	2,698	2,698	2,698	2,698	288	12.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,904	5,904	5,904	5,903	5,903	5,903	5,903	5,903	5,903	5,903	5,903	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	7	0.2%
Dry Year Average	5,374	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,374	0	0.0%
Critically Dry Year Average	3,421	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	12	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	NC1012	NC1013	NC1014	NC1015	NC1016	NC1017	NC1018	NC1019	NC1020	NC1021	NC1022	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,794	3,849	3,873	3,895	3,910	3,914	3,918	3,922	3,926	3,930	3,931	3,931	157	4.1%
1928-34 Dry Period Average	3,249	3,259	3,298	3,348	3,395	3,404	3,404	3,404	3,404	3,404	3,404	3,404	3,404	155	4.8%
Dry Year Average	3,484	3,516	3,643	3,674	3,727	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	273	7.8%
Critically Dry Year Average	2,942	2,949	2,969	3,060	3,136	3,166	3,193	3,220	3,245	3,271	3,297	3,302	3,302	360	12.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,448	2,448	2,448	2,448	2,448	2,448	2,448	2,448	38	1.6%
Ag & Urban Benefits															
71-Year Average	5,921	5,914	5,937	5,952	5,963	5,972	5,980	5,987	5,993	5,999	6,005	6,010	6,010	89	1.5%
1928-34 Dry Period Average	3,918	3,928	3,941	3,958	3,974	3,972	3,972	3,972	3,972	3,972	3,972	3,972	3,974	56	1.4%
Dry Year Average	5,374	5,380	5,408	5,422	5,443	5,466	5,486	5,503	5,515	5,524	5,532	5,539	5,539	166	3.1%
Critically Dry Year Average	3,421	3,435	3,444	3,457	3,471	3,482	3,493	3,503	3,515	3,528	3,541	3,553	3,553	133	3.9%
Minimum Annual	2,206	2,212	2,236	2,266	2,296	2,328	2,356	2,417	2,476	2,536	2,565	2,573	2,573	366	16.6%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	NC1023	NC1024	NC1025	NC1026	NC1027	NC1028	NC1029	NC1030	NC1031	NC1032	NC1033	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,788	3,832	3,855	3,871	3,883	3,895	3,902	3,906	3,908	3,911	3,914	3,914	140	3.7%
1928-34 Dry Period Average	3,249	3,256	3,283	3,316	3,347	3,347	3,347	3,347	3,347	3,347	3,347	3,347	3,347	98	3.0%
Dry Year Average	3,484	3,504	3,596	3,642	3,668	3,690	3,727	3,739	3,743	3,743	3,743	3,743	3,743	259	7.4%
Critically Dry Year Average	2,942	2,946	2,968	3,021	3,062	3,114	3,135	3,144	3,162	3,178	3,196	3,214	3,214	272	9.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,921	5,955	5,978	5,995	6,008	6,018	6,028	6,037	6,044	6,049	6,054	6,054	133	2.2%
1928-34 Dry Period Average	3,918	3,932	3,967	3,987	4,014	4,014	4,014	4,014	4,014	4,014	4,014	4,014	4,014	96	2.5%
Dry Year Average	5,374	5,386	5,433	5,475	5,513	5,534	5,549	5,562	5,568	5,571	5,575	5,578	5,578	204	3.8%
Critically Dry Year Average	3,421	3,437	3,456	3,487	3,520	3,544	3,568	3,583	3,618	3,642	3,666	3,692	3,692	271	7.9%
Minimum Annual	2,206	2,218	2,265	2,326	2,406	2,527	2,567	2,578	2,593	2,607	2,623	2,642	2,642	435	19.7%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC1034	NC1035	NC1036	NC1037	NC1038	NC1039	NC1040	NC1041	NC1042	NC1043	NC1044	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,781	3,805	3,829	3,841	3,847	3,854	3,860	3,867	3,873	3,879	3,884	3,884	110	2.9%
1928-34 Dry Period Average	3,249	3,252	3,266	3,283	3,299	3,299	3,299	3,299	3,299	3,299	3,299	3,299	3,299	50	1.5%
Dry Year Average	3,484	3,493	3,534	3,584	3,608	3,617	3,630	3,645	3,660	3,675	3,688	3,706	3,706	222	6.4%
Critically Dry Year Average	2,942	2,944	2,953	2,969	2,991	3,013	3,034	3,055	3,074	3,084	3,095	3,098	3,098	156	5.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,926	5,947	5,965	6,015	6,029	6,039	6,047	6,054	6,062	6,068	6,075	6,075	154	2.6%
1928-34 Dry Period Average	3,918	3,935	3,971	4,015	4,057	4,057	4,057	4,057	4,057	4,057	4,057	4,057	4,057	139	3.5%
Dry Year Average	5,374	5,395	5,458	5,507	5,542	5,564	5,581	5,596	5,573	5,578	5,580	5,585	5,585	211	3.9%
Critically Dry Year Average	3,421	3,440	3,470	3,519	3,571	3,609	3,644	3,682	3,719	3,755	3,796	3,832	3,832	411	12.0%
Minimum Annual	2,206	2,224	2,295	2,433	2,559	2,576	2,597	2,624	2,649	2,670	2,706	2,782	2,782	576	26.1%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC1045	NC1046	NC1047	NC1048	NC1049	NC1050	NC1051	NC1052	NC1053	NC1054	NC1055	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,930	5,974	6,006	6,028	6,038	6,048	6,057	6,065	6,073	6,080	6,086	6,086	165	2.8%
1928-34 Dry Period Average	3,918	3,938	3,984	4,045	4,101	4,101	4,101	4,101	4,101	4,101	4,101	4,101	4,101	183	4.7%
Dry Year Average	5,374	5,403	5,482	5,526	5,552	5,559	5,564	5,568	5,568	5,568	5,568	5,568	5,568	194	3.6%
Critically Dry Year Average	3,421	3,442	3,485	3,558	3,629	3,676	3,726	3,777	3,830	3,883	3,930	3,965	3,965	544	15.9%
Minimum Annual	2,206	2,231	2,326	2,549	2,577	2,607	2,643	2,684	2,772	2,906	3,038	3,038	3,038	832	37.7%

Table NC-15

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 85%

Run Identifiers	Base 1	NC1121	NC1122	NC1123	NC1124	NC1125	NC1126	NC1127	NC1128	NC1129	NC1130	NC1131	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,814	3,933	4,015	4,057	4,087	4,112	4,137	4,159	4,177	4,194	4,212	4,212	438	11.6%
1928-34 Dry Period Average	3,249	3,262	3,316	3,383	3,406	3,406	3,406	3,406	3,406	3,406	3,406	3,406	3,406	157	4.8%
Dry Year Average	3,484	3,506	3,603	3,758	3,897	3,974	4,028	4,066	4,139	4,166	4,183	4,218	4,218	734	21.1%
Critically Dry Year Average	2,942	2,951	3,002	3,088	3,147	3,189	3,232	3,274	3,334	3,373	3,411	3,426	3,426	484	16.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,889	5,889	5,889	5,888	5,888	5,888	5,888	5,888	5,886	5,886	5,886	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,880	3,880	3,880	3,880	3,880	3,880	3,880	3,880	3,880	3,880	3,880	3,918	0	0.0%
Dry Year Average	5,374	5,336	5,336	5,336	5,336	5,336	5,336	5,336	5,336	5,336	5,336	5,336	5,374	0	0.0%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 88%

Run Identifiers	Base 1	NC1132	NC1133	NC1134	NC1135	NC1136	NC1137	NC1138	NC1139	NC1140	NC1141	NC1142	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,805	3,886	3,969	4,008	4,033	4,053	4,072	4,091	4,110	4,125	4,138	4,138	364	9.7%
1928-34 Dry Period Average	3,249	3,256	3,299	3,349	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	3,359	110	3.4%
Dry Year Average	3,484	3,500	3,562	3,682	3,796	3,860	3,926	3,966	4,008	4,052	4,081	4,101	4,101	618	17.7%
Critically Dry Year Average	2,942	2,949	2,987	3,052	3,091	3,124	3,155	3,188	3,220	3,259	3,296	3,326	3,326	384	13.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,921	6,899	6,921	6,936	6,949	6,957	6,965	6,972	6,979	6,984	6,991	6,997	6,997	76	1.3%
1928-34 Dry Period Average	3,918	3,883	3,896	3,913	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	3,925	7	0.2%
Dry Year Average	5,374	5,344	5,370	5,383	5,402	5,422	5,439	5,454	5,469	5,484	5,496	5,510	5,510	137	2.5%
Critically Dry Year Average	3,421	3,386	3,396	3,409	3,420	3,430	3,442	3,454	3,466	3,476	3,486	3,496	3,496	76	2.3%
Minimum Annual	2,206	2,212	2,234	2,260	2,295	2,324	2,357	2,389	2,420	2,467	2,527	2,558	2,558	351	15.9%

Facilities Allocation Factor = 90%

Run Identifiers	Base 1	NC1123	NC1124	NC1125	NC1126	NC1127	NC1128	NC1129	NC1130	NC1131	NC1132	NC1133	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,795	3,862	3,918	3,953	3,974	3,992	4,008	4,021	4,034	4,047	4,060	4,060	286	7.6%
1928-34 Dry Period Average	3,249	3,256	3,283	3,316	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,316	68	2.1%
Dry Year Average	3,484	3,496	3,520	3,586	3,665	3,721	3,782	3,835	3,963	3,891	3,919	3,946	3,946	462	13.3%
Critically Dry Year Average	2,942	2,946	2,966	3,010	3,028	3,051	3,073	3,095	3,116	3,136	3,159	3,180	3,180	238	8.1%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,906	5,937	5,953	5,962	5,967	6,009	6,020	6,027	6,033	6,039	6,045	6,045	124	2.1%
1928-34 Dry Period Average	3,918	3,886	3,912	3,943	3,968	3,968	3,968	3,968	3,968	3,968	3,968	3,968	3,968	50	1.3%
Dry Year Average	5,374	5,353	5,395	5,431	5,466	5,496	5,522	5,534	5,542	5,548	5,552	5,554	5,554	180	3.3%
Critically Dry Year Average	3,421	3,389	3,408	3,437	3,470	3,491	3,517	3,542	3,566	3,590	3,613	3,641	3,641	220	6.4%
Minimum Annual	2,206	2,218	2,265	2,324	2,386	2,489	2,559	2,572	2,582	2,594	2,605	2,626	2,626	420	19.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC1134	NC1135	NC1136	NC1137	NC1138	NC1139	NC1140	NC1141	NC1142	NC1143	NC1144	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,784	3,820	3,856	3,880	3,899	3,910	3,921	3,930	3,940	3,950	3,958	3,958	184	4.9%
1928-34 Dry Period Average	3,249	3,252	3,266	3,284	3,267	3,267	3,267	3,267	3,267	3,267	3,267	3,267	3,284	35	1.1%
Dry Year Average	3,484	3,490	3,502	3,510	3,535	3,572	3,584	3,606	3,625	3,655	3,683	3,713	3,713	229	6.6%
Critically Dry Year Average	2,942	2,944	2,953	2,964	2,975	2,987	2,998	3,009	3,020	3,031	3,043	3,054	3,054	112	3.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,911	5,950	5,979	6,003	6,017	6,026	6,035	6,043	6,050	6,056	6,063	6,063	142	2.4%
1928-34 Dry Period Average	3,918	3,890	3,926	3,971	4,011	4,011	4,011	4,011	4,011	4,011	4,011	4,011	4,011	93	2.4%
Dry Year Average	5,374	5,360	5,423	5,477	5,519	5,531	5,536	5,542	5,546	5,552	5,552	5,555	5,555	181	3.4%
Critically Dry Year Average	3,421	3,381	3,422	3,473	3,524	3,560	3,596	3,631	3,670	3,706	3,749	3,789	3,789	368	10.8%
Minimum Annual	2,206	2,224	2,294	2,403	2,556	2,573	2,589	2,607	2,639	2,668	2,717	2,798	2,798	592	26.8%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC1145	NC1146	NC1147	NC1148	NC1149	NC1150	NC1151	NC1152	NC1153	NC1154	NC1155	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,914	5,959	5,995	6,018	6,029	6,039	6,048	6,056	6,064	6,072	6,078	6,078	157	2.6%
1928-34 Dry Period Average	3,918	3,892	3,940	4,001	4,057	4,057	4,057	4,057	4,057	4,057	4,057	4,057	4,057	139	3.5%
Dry Year Average	5,374	5,367	5,452	5,520	5,545	5,562	5,567	5,562	5,562	5,562	5,562	5,562	5,562	188	3.5%
Critically Dry Year Average	3,421	3,394	3,441	3,511	3,580	3,629	3,678	3,728	3,781	3,835	3,884	3,922	3,922	501	14.7%
Minimum Annual	2,206	2,230	2,326	2,518	2,574	2,568	2,629	2,672	2,752	2,865	3,037	3,037	3,037	831	37.7%

Table NC-16

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC1201	NC1202	NC1203	NC1204	NC1205	NC1206	NC1207	NC1208	NC1209	NC1210	NC1211	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,801	3,858	3,889	3,913	3,920	3,926	3,931	3,937	3,937	3,937	3,937	3,937	163	4.3%
1928-34 Dry Period Average	3,249	3,262	3,314	3,378	3,437	3,460	3,460	3,460	3,460	3,460	3,460	3,460	3,460	212	6.5%
Dry Year Average	3,484	3,526	3,657	3,707	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	273	7.8%
Critically Dry Year Average	2,942	2,951	3,018	3,124	3,186	3,237	3,272	3,307	3,341	3,341	3,341	3,341	3,341	399	13.6%
Minimum Annual	2,410	2,410	2,410	2,410	2,679	2,696	2,696	2,696	2,696	2,696	2,696	2,696	2,696	286	12.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,927	5,927	5,927	5,927	5,927	5,927	5,927	5,927	5,927	5,927	5,927	5,927	6	0.1%
1928-34 Dry Period Average	3,918	3,936	3,936	3,936	3,936	3,936	3,936	3,936	3,936	3,936	3,936	3,936	3,936	18	0.5%
Dry Year Average	5,374	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	20	0.4%
Critically Dry Year Average	3,421	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	12	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	NC1212	NC1213	NC1214	NC1215	NC1216	NC1217	NC1218	NC1219	NC1220	NC1221	NC1222	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,794	3,849	3,873	3,895	3,909	3,913	3,918	3,922	3,926	3,929	3,930	3,930	157	4.1%
1928-34 Dry Period Average	3,249	3,259	3,299	3,348	3,394	3,403	3,403	3,403	3,403	3,403	3,403	3,403	3,403	155	4.8%
Dry Year Average	3,484	3,516	3,645	3,674	3,726	3,757	3,757	3,757	3,757	3,757	3,757	3,757	3,757	273	7.8%
Critically Dry Year Average	2,942	2,949	2,985	3,060	3,135	3,165	3,192	3,219	3,245	3,271	3,295	3,302	3,302	360	12.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,445	2,445	2,445	2,445	2,445	2,445	2,445	2,445	35	1.4%
Ag & Urban Benefits															
71-Year Average	5,921	5,941	5,976	5,994	6,007	6,017	6,024	6,032	6,040	6,046	6,052	6,058	6,058	137	2.3%
1928-34 Dry Period Average	3,918	3,939	3,953	3,970	3,987	3,979	3,979	3,979	3,979	3,979	3,979	3,979	3,987	69	1.8%
Dry Year Average	5,374	5,402	5,430	5,444	5,472	5,492	5,517	5,540	5,563	5,584	5,574	5,580	5,580	207	3.8%
Critically Dry Year Average	3,421	3,435	3,443	3,454	3,473	3,479	3,490	3,501	3,511	3,522	3,535	3,555	3,555	134	3.9%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,260	2,379	2,499	2,532	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	NC1223	NC1224	NC1225	NC1226	NC1227	NC1228	NC1229	NC1230	NC1231	NC1232	NC1233	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,788	3,832	3,855	3,870	3,883	3,894	3,901	3,904	3,907	3,909	3,912	3,912	138	3.7%
1928-34 Dry Period Average	3,249	3,256	3,283	3,316	3,347	3,347	3,347	3,347	3,347	3,347	3,347	3,347	3,347	98	3.0%
Dry Year Average	3,484	3,504	3,596	3,641	3,667	3,686	3,724	3,736	3,743	3,743	3,743	3,743	3,743	259	7.4%
Critically Dry Year Average	2,942	2,946	2,968	3,021	3,081	3,114	3,136	3,139	3,153	3,170	3,186	3,203	3,203	261	8.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,953	6,001	6,029	6,050	6,066	6,079	6,091	6,103	6,115	6,125	6,132	6,132	211	3.6%
1928-34 Dry Period Average	3,918	3,943	3,969	4,002	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	107	2.7%
Dry Year Average	5,374	5,410	5,462	5,510	5,553	5,579	5,594	5,607	5,615	5,615	5,615	5,615	5,615	241	4.5%
Critically Dry Year Average	3,421	3,437	3,453	3,494	3,530	3,567	3,599	3,641	3,662	3,722	3,763	3,803	3,803	382	11.2%
Minimum Annual	2,206	2,206	2,206	2,254	2,481	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	NC1234	NC1235	NC1236	NC1237	NC1238	NC1239	NC1240	NC1241	NC1242	NC1243	NC1244	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,781	3,805	3,827	3,841	3,847	3,854	3,860	3,866	3,872	3,878	3,882	3,882	108	2.9%
1928-34 Dry Period Average	3,249	3,252	3,266	3,283	3,299	3,299	3,299	3,299	3,299	3,299	3,299	3,299	3,299	50	1.5%
Dry Year Average	3,484	3,494	3,534	3,578	3,608	3,616	3,630	3,644	3,658	3,670	3,683	3,698	3,698	214	6.1%
Critically Dry Year Average	2,942	2,944	2,953	2,969	2,991	3,012	3,033	3,052	3,071	3,084	3,096	3,096	3,096	154	5.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,962	6,017	6,052	6,076	6,094	6,112	6,124	6,134	6,144	6,153	6,159	6,159	238	4.0%
1928-34 Dry Period Average	3,918	3,946	3,985	4,032	4,071	4,071	4,071	4,071	4,071	4,071	4,071	4,071	4,071	153	3.9%
Dry Year Average	5,374	5,417	5,493	5,547	5,583	5,596	5,598	5,596	5,606	5,627	5,648	5,663	5,663	289	5.4%
Critically Dry Year Average	3,421	3,439	3,475	3,537	3,608	3,672	3,734	3,796	3,850	3,879	3,873	3,883	3,883	462	13.5%
Minimum Annual	2,206	2,206	2,206	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	326	14.8%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	NC1245	NC1246	NC1247	NC1248	NC1249	NC1250	NC1251	NC1252	NC1253	NC1254	NC1255	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,968	6,029	6,068	6,097	6,114	6,127	6,139	6,152	6,158	6,163	6,169	6,169	248	4.2%
1928-34 Dry Period Average	3,918	3,949	3,999	4,064	4,118	4,118	4,118	4,118	4,118	4,118	4,118	4,118	4,118	200	5.1%
Dry Year Average	5,374	5,426	5,515	5,570	5,586	5,586	5,590	5,618	5,638	5,638	5,638	5,638	5,638	264	4.9%
Critically Dry Year Average	3,421	3,441	3,498	3,589	3,706	3,788	3,864	3,900	3,910	3,946	3,983	4,021	4,021	601	17.6%
Minimum Annual	2,206	2,206	2,300	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,654	3,009	3,009	802	36.4%

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Table NC-17

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	NC1311	NC1312	NC1313	NC1314	NC1315	NC1316	NC1317	NC1318	NC1319	NC1320	NC1321	NC1322	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000				
Environmental Benefits																
71-Year Average	3,768	3,805	3,922	4,003	4,043	4,072	4,097	4,122	4,144	4,162	4,180	4,197	4,197	429	11.4%
1928-34 Dry Period Average	3,195	3,208	3,262	3,329	3,349	3,349	3,349	3,349	3,349	3,349	3,349	3,349	3,349	154	4.8%
Dry Year Average	3,456	3,471	3,568	3,733	3,860	3,932	3,987	4,042	4,096	4,122	4,153	4,196	4,196	740	21.4%
Critically Dry Year Average	2,938	2,946	2,985	3,081	3,136	3,177	3,219	3,262	3,326	3,365	3,404	3,415	3,415	477	16.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits																
71-Year Average	6,169	6,154	6,153	6,153	6,152	6,151	6,150	6,150	6,150	6,149	6,149	6,149	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,023	4,033	0	0.0%
Dry Year Average	5,635	5,598	5,598	5,598	5,598	5,598	5,598	5,598	5,598	5,598	5,598	5,598	5,635	0	0.0%
Critically Dry Year Average	3,460	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,460	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC1312	NC1313	NC1314	NC1315	NC1316	NC1317	NC1318	NC1319	NC1320	NC1321	NC1322	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,796	3,886	3,951	3,989	4,014	4,033	4,052	4,072	4,090	4,106	4,120	4,120	352	9.3%
1928-34 Dry Period Average	3,195	3,205	3,245	3,295	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309	114	3.6%
Dry Year Average	3,456	3,468	3,533	3,650	3,762	3,851	3,883	3,924	3,966	4,013	4,053	4,079	4,079	623	18.0%
Critically Dry Year Average	2,938	2,944	2,981	3,045	3,086	3,118	3,149	3,181	3,212	3,249	3,294	3,328	3,328	390	13.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,167	6,204	6,235	6,248	6,260	6,269	6,278	6,285	6,292	6,293	6,293	6,293	124	2.0%
1928-34 Dry Period Average	4,033	4,027	4,040	4,056	4,041	4,041	4,041	4,041	4,041	4,041	4,041	4,041	4,056	22	0.6%
Dry Year Average	5,635	5,601	5,613	5,622	5,642	5,670	5,683	5,715	5,735	5,744	5,733	5,718	5,744	109	1.9%
Critically Dry Year Average	3,460	3,468	3,468	3,473	3,484	3,495	3,505	3,516	3,527	3,537	3,548	3,559	3,559	79	2.3%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,246	2,363	2,363	179	8.2%

Facilities Allocation Factor = 34%

Run Identifiers	Base 2	NC1323	NC1324	NC1325	NC1326	NC1327	NC1328	NC1329	NC1330	NC1331	NC1332	NC1333	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,787	3,852	3,901	3,931	3,953	3,970	3,985	3,997	4,010	4,021	4,030	4,030	262	6.9%
1928-34 Dry Period Average	3,195	3,201	3,229	3,262	3,263	3,263	3,263	3,263	3,263	3,263	3,263	3,263	3,263	68	2.1%
Dry Year Average	3,456	3,465	3,493	3,554	3,615	3,663	3,742	3,788	3,808	3,834	3,857	3,871	3,871	414	12.0%
Critically Dry Year Average	2,938	2,942	2,961	3,004	3,026	3,048	3,070	3,091	3,112	3,133	3,154	3,175	3,175	236	8.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,178	6,241	6,289	6,312	6,331	6,346	6,357	6,369	6,381	6,389	6,394	6,394	225	3.6%
1928-34 Dry Period Average	4,033	4,030	4,057	4,084	4,083	4,083	4,083	4,083	4,083	4,083	4,083	4,083	4,084	50	1.2%
Dry Year Average	5,635	5,605	5,635	5,682	5,739	5,790	5,836	5,865	5,899	5,932	5,937	5,936	5,937	302	5.4%
Critically Dry Year Average	3,460	3,468	3,473	3,495	3,515	3,536	3,557	3,578	3,600	3,630	3,671	3,710	3,710	231	6.6%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,193	2,358	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	NC1334	NC1335	NC1336	NC1337	NC1338	NC1339	NC1340	NC1341	NC1342	NC1343	NC1344	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,778	3,812	3,844	3,864	3,879	3,892	3,902	3,912	3,920	3,924	3,924	3,924	156	4.1%
1928-34 Dry Period Average	3,195	3,196	3,212	3,225	3,213	3,213	3,213	3,213	3,213	3,213	3,213	3,213	3,225	30	0.9%
Dry Year Average	3,456	3,461	3,473	3,480	3,501	3,524	3,546	3,569	3,591	3,616	3,626	3,634	3,634	178	5.1%
Critically Dry Year Average	2,938	2,940	2,949	2,959	2,970	2,982	2,992	3,003	3,014	3,025	3,036	3,047	3,047	109	3.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,188	6,259	6,324	6,353	6,380	6,397	6,416	6,433	6,448	6,459	6,468	6,468	299	4.9%
1928-34 Dry Period Average	4,033	4,033	4,073	4,121	4,132	4,132	4,132	4,132	4,132	4,132	4,132	4,132	4,132	98	2.4%
Dry Year Average	5,635	5,608	5,674	5,788	5,866	5,928	5,961	5,981	5,987	5,986	6,028	6,052	6,052	416	7.4%
Critically Dry Year Average	3,460	3,468	3,483	3,541	3,579	3,615	3,676	3,734	3,791	3,850	3,862	3,896	3,896	416	12.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,334	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC1345	NC1346	NC1347	NC1348	NC1349	NC1350	NC1351	NC1352	NC1353	NC1354	NC1355	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,197	6,292	6,345	6,381	6,406	6,430	6,449	6,466	6,483	6,490	6,496	6,496	327	5.3%
1928-34 Dry Period Average	4,033	4,036	4,089	4,153	4,183	4,183	4,183	4,183	4,183	4,183	4,183	4,183	4,183	150	3.7%
Dry Year Average	5,635	5,611	5,726	5,863	5,940	5,969	5,984	6,012	6,051	6,069	6,069	6,069	6,069	434	7.7%
Critically Dry Year Average	3,460	3,468	3,504	3,585	3,656	3,742	3,823	3,887	3,925	3,937	3,972	4,007	4,007	527	15.2%
Minimum Annual	2,184	2,184	2,184	2,251	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Table NC-18

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High Sacramento River Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC1401	NC1402	NC1403	NC1404	NC1405	NC1406	NC1407	NC1408	NC1409	NC1410	NC1411	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,766	3,795	3,854	3,885	3,908	3,915	3,920	3,926	3,931	3,933	3,933	3,933	3,933	164	4.4%
1928-34 Dry Period Average	3,195	3,208	3,280	3,324	3,383	3,395	3,395	3,395	3,395	3,395	3,395	3,395	3,395	200	6.3%
Dry Year Average	3,456	3,497	3,643	3,686	3,738	3,745	3,745	3,745	3,745	3,745	3,745	3,745	3,745	288	8.3%
Critically Dry Year Average	2,938	2,946	3,002	3,112	3,171	3,206	3,241	3,278	3,312	3,320	3,320	3,320	3,320	382	13.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,695	2,699	2,699	2,699	2,699	2,699	2,699	2,699	2,699	289	12.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,126	6,125	6,125	6,124	6,124	6,124	6,124	6,124	6,124	6,124	6,124	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,025	4,033	0	0.0%
Dry Year Average	5,635	5,608	5,608	5,608	5,608	5,608	5,608	5,608	5,608	5,606	5,606	5,606	5,635	0	0.0%
Critically Dry Year Average	3,480	3,498	3,498	3,498	3,498	3,498	3,498	3,498	3,498	3,498	3,498	3,498	3,498	18	0.5%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC1412	NC1413	NC1414	NC1415	NC1416	NC1417	NC1418	NC1419	NC1420	NC1421	NC1422	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,789	3,844	3,869	3,891	3,904	3,908	3,912	3,916	3,920	3,924	3,927	3,927	158	4.2%
1928-34 Dry Period Average	3,195	3,205	3,245	3,294	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	3,340	145	4.5%
Dry Year Average	3,456	3,487	3,620	3,662	3,703	3,738	3,743	3,743	3,743	3,743	3,743	3,743	3,743	287	8.3%
Critically Dry Year Average	2,938	2,944	2,983	3,062	3,127	3,148	3,166	3,190	3,216	3,243	3,266	3,284	3,284	346	11.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,137	6,161	6,180	6,194	6,204	6,213	6,220	6,228	6,234	6,240	6,246	6,246	77	1.2%
1928-34 Dry Period Average	4,033	4,029	4,042	4,059	4,071	4,071	4,071	4,071	4,071	4,071	4,071	4,071	4,071	38	0.9%
Dry Year Average	5,635	5,613	5,639	5,666	5,697	5,729	5,750	5,772	5,794	5,809	5,821	5,834	5,834	199	3.5%
Critically Dry Year Average	3,480	3,498	3,507	3,521	3,536	3,547	3,567	3,568	3,578	3,593	3,608	3,624	3,624	144	4.1%
Minimum Annual	2,184	2,185	2,204	2,229	2,255	2,290	2,371	2,454	2,535	2,552	2,554	2,556	2,556	372	17.0%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	NC1423	NC1424	NC1425	NC1426	NC1427	NC1428	NC1429	NC1430	NC1431	NC1432	NC1433	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,782	3,827	3,851	3,866	3,878	3,890	3,897	3,900	3,902	3,905	3,908	3,908	140	3.7%
1928-34 Dry Period Average	3,195	3,201	3,229	3,262	3,291	3,291	3,291	3,291	3,291	3,291	3,291	3,291	3,291	96	3.0%
Dry Year Average	3,456	3,476	3,567	3,629	3,650	3,671	3,702	3,723	3,726	3,726	3,726	3,726	3,726	270	7.8%
Critically Dry Year Average	2,938	2,942	2,963	3,005	3,063	3,104	3,123	3,121	3,134	3,152	3,170	3,188	3,188	250	8.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,145	6,183	6,212	6,231	6,247	6,260	6,270	6,282	6,293	6,300	6,308	6,308	139	2.2%
1928-34 Dry Period Average	4,033	4,032	4,058	4,091	4,116	4,116	4,116	4,116	4,116	4,116	4,116	4,116	4,116	83	2.1%
Dry Year Average	5,635	5,620	5,676	5,744	5,794	5,835	5,860	5,877	5,892	5,909	5,920	5,924	5,924	288	5.1%
Critically Dry Year Average	3,480	3,501	3,520	3,556	3,586	3,612	3,643	3,673	3,703	3,733	3,763	3,793	3,793	314	9.0%
Minimum Annual	2,184	2,190	2,228	2,278	2,437	2,552	2,555	2,559	2,563	2,566	2,570	2,574	2,574	390	17.9%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	NC1434	NC1435	NC1436	NC1437	NC1438	NC1439	NC1440	NC1441	NC1442	NC1443	NC1444	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,775	3,801	3,823	3,836	3,842	3,849	3,855	3,862	3,868	3,874	3,878	3,878	110	2.9%
1928-34 Dry Period Average	3,195	3,196	3,212	3,229	3,244	3,244	3,244	3,244	3,244	3,244	3,244	3,244	3,244	49	1.5%
Dry Year Average	3,456	3,466	3,505	3,549	3,582	3,598	3,607	3,621	3,635	3,650	3,664	3,676	3,676	220	6.4%
Critically Dry Year Average	2,938	2,940	2,948	2,964	2,984	2,995	3,016	3,037	3,058	3,077	3,084	3,084	3,084	146	5.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,151	6,200	6,234	6,258	6,275	6,291	6,302	6,313	6,320	6,329	6,332	6,332	163	2.6%
1928-34 Dry Period Average	4,033	4,035	4,073	4,120	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	4,160	127	3.1%
Dry Year Average	5,635	5,628	5,719	5,800	5,852	5,877	5,900	5,904	5,917	5,930	5,932	5,934	5,934	298	5.3%
Critically Dry Year Average	3,480	3,503	3,536	3,568	3,649	3,691	3,736	3,780	3,821	3,864	3,900	3,928	3,928	448	12.9%
Minimum Annual	2,184	2,195	2,252	2,472	2,554	2,559	2,564	2,570	2,583	2,607	2,671	2,740	2,740	556	25.5%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC1445	NC1446	NC1447	NC1448	NC1449	NC1450	NC1451	NC1452	NC1453	NC1454	NC1455	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,766	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,156	6,211	6,250	6,277	6,293	6,305	6,315	6,324	6,330	6,335	6,340	6,340	171	2.8%
1928-34 Dry Period Average	4,033	4,038	4,087	4,151	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	172	4.3%
Dry Year Average	5,635	5,636	5,757	5,839	5,876	5,885	5,893	5,903	5,903	5,903	5,903	5,903	5,903	268	4.8%
Critically Dry Year Average	3,480	3,505	3,555	3,631	3,716	3,776	3,831	3,880	3,938	3,974	4,008	4,041	4,041	562	16.1%
Minimum Annual	2,184	2,199	2,309	2,552	2,580	2,567	2,581	2,634	2,724	2,885	2,994	2,964	2,994	810	37.1%

NC_Rvsd NLS Results.Tbl

D-006652

Table NC-19

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	NC1501	NC1502	NC1503	NC1504	NC1505	NC1506	NC1507	NC1508	NC1509	NC1510	NC1511	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,805	3,922	4,004	4,044	4,073	4,096	4,123	4,145	4,163	4,180	4,197	4,197	429	11.4%
1928-34 Dry Period Average	3,195	3,208	3,282	3,329	3,349	3,349	3,349	3,349	3,349	3,349	3,349	3,349	3,349	154	4.8%
Dry Year Average	3,456	3,471	3,568	3,733	3,860	3,932	3,987	4,042	4,096	4,122	4,153	4,196	4,196	740	21.4%
Critically Dry Year Average	2,938	2,946	2,995	3,081	3,136	3,177	3,219	3,262	3,326	3,365	3,404	3,415	3,415	477	16.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,104	6,103	6,103	6,102	6,101	6,100	6,100	6,100	6,099	6,099	6,099	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,005	4,005	4,005	4,005	4,005	4,005	4,005	4,005	4,005	4,005	4,005	4,033	0	0.0%
Dry Year Average	5,635	5,561	5,561	5,561	5,561	5,561	5,561	5,561	5,561	5,561	5,561	5,561	5,635	0	0.0%
Critically Dry Year Average	3,480	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,463	3,480	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC1512	NC1513	NC1514	NC1515	NC1516	NC1517	NC1518	NC1519	NC1520	NC1521	NC1522	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,796	3,889	3,956	3,994	4,018	4,036	4,057	4,077	4,095	4,110	4,122	4,122	354	9.4%
1928-34 Dry Period Average	3,195	3,205	3,245	3,295	3,302	3,302	3,302	3,302	3,302	3,302	3,302	3,302	3,302	107	3.4%
Dry Year Average	3,456	3,468	3,527	3,641	3,755	3,839	3,880	3,921	3,963	4,002	4,030	4,053	4,053	597	17.3%
Critically Dry Year Average	2,938	2,944	2,990	3,045	3,081	3,113	3,144	3,176	3,208	3,247	3,286	3,308	3,308	370	12.6%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,115	6,140	6,156	6,173	6,183	6,190	6,197	6,204	6,211	6,217	6,218	6,218	49	0.8%
1928-34 Dry Period Average	4,033	4,009	4,022	4,039	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	4,050	16	0.4%
Dry Year Average	5,635	5,567	5,564	5,612	5,641	5,667	5,685	5,706	5,725	5,748	5,765	5,757	5,765	130	2.3%
Critically Dry Year Average	3,480	3,463	3,473	3,486	3,498	3,510	3,522	3,534	3,545	3,555	3,567	3,582	3,582	102	2.9%
Minimum Annual	2,184	2,185	2,204	2,227	2,253	2,278	2,303	2,330	2,408	2,490	2,551	2,553	2,553	369	16.9%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	NC1523	NC1524	NC1525	NC1526	NC1527	NC1528	NC1529	NC1530	NC1531	NC1532	NC1533	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,787	3,853	3,907	3,939	3,956	3,975	3,992	4,005	4,017	4,029	4,037	4,037	269	7.1%
1928-34 Dry Period Average	3,195	3,201	3,229	3,262	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,262	68	2.1%
Dry Year Average	3,456	3,464	3,488	3,551	3,619	3,678	3,706	3,790	3,820	3,838	3,861	3,871	3,871	414	12.0%
Critically Dry Year Average	2,938	2,942	2,960	3,003	3,020	3,042	3,064	3,085	3,106	3,127	3,148	3,169	3,169	231	7.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,123	6,160	6,191	6,211	6,229	6,241	6,254	6,265	6,274	6,282	6,289	6,289	120	2.0%
1928-34 Dry Period Average	4,033	4,012	4,038	4,071	4,094	4,094	4,094	4,094	4,094	4,094	4,094	4,094	4,094	61	1.5%
Dry Year Average	5,635	5,575	5,626	5,684	5,731	5,782	5,809	5,831	5,848	5,865	5,871	5,875	5,875	240	4.3%
Critically Dry Year Average	3,480	3,466	3,485	3,520	3,554	3,577	3,608	3,639	3,668	3,696	3,727	3,756	3,756	277	8.0%
Minimum Annual	2,184	2,190	2,227	2,276	2,356	2,517	2,555	2,559	2,562	2,566	2,570	2,577	2,577	393	18.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	NC1534	NC1535	NC1536	NC1537	NC1538	NC1539	NC1540	NC1541	NC1542	NC1543	NC1544	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,778	3,813	3,845	3,869	3,884	3,896	3,906	3,916	3,926	3,934	3,942	3,942	173	4.6%
1928-34 Dry Period Average	3,195	3,198	3,212	3,229	3,213	3,213	3,213	3,213	3,213	3,213	3,213	3,213	3,229	35	1.1%
Dry Year Average	3,456	3,461	3,473	3,480	3,504	3,527	3,547	3,566	3,589	3,619	3,649	3,679	3,679	222	6.4%
Critically Dry Year Average	2,938	2,940	2,949	2,960	2,970	2,982	2,992	3,003	3,014	3,025	3,036	3,047	3,047	109	3.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,130	6,178	6,212	6,238	6,256	6,270	6,282	6,292	6,300	6,306	6,313	6,313	144	2.3%
1928-34 Dry Period Average	4,033	4,015	4,054	4,100	4,138	4,138	4,138	4,138	4,138	4,138	4,138	4,138	4,138	105	2.6%
Dry Year Average	5,635	5,563	5,669	5,749	5,803	5,829	5,846	5,851	5,860	5,873	5,873	5,875	5,875	238	4.2%
Critically Dry Year Average	3,480	3,468	3,502	3,556	3,614	3,659	3,702	3,748	3,785	3,823	3,870	3,911	3,911	432	12.4%
Minimum Annual	2,184	2,194	2,251	2,393	2,554	2,559	2,564	2,570	2,584	2,626	2,694	2,765	2,765	581	26.6%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC1545	NC1546	NC1547	NC1548	NC1549	NC1550	NC1551	NC1552	NC1553	NC1554	NC1555	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,134	6,190	6,231	6,259	6,275	6,288	6,299	6,309	6,315	6,320	6,325	6,325	156	2.5%
1928-34 Dry Period Average	4,033	4,018	4,068	4,132	4,185	4,185	4,185	4,185	4,185	4,185	4,185	4,185	4,185	152	3.8%
Dry Year Average	5,635	5,560	5,709	5,798	5,843	5,855	5,863	5,873	5,873	5,873	5,873	5,873	5,873	238	4.2%
Critically Dry Year Average	3,480	3,471	3,523	3,600	3,686	3,745	3,799	3,849	3,912	3,950	3,984	4,018	4,018	538	15.5%
Minimum Annual	2,184	2,198	2,276	2,548	2,560	2,567	2,581	2,634	2,724	2,829	2,994	2,994	2,994	810	37.1%

Table NC-20

Upstream of Delta Off-Stream Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	NC1601	NC1602	NC1603	NC1604	NC1605	NC1606	NC1607	NC1608	NC1609	NC1610	NC1611	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,795	3,854	3,885	3,908	3,915	3,920	3,926	3,931	3,933	3,933	3,933	3,933	164	4.4%
1928-34 Dry Period Average	3,195	3,208	3,260	3,324	3,363	3,395	3,395	3,395	3,395	3,395	3,395	3,395	3,395	200	6.3%
Dry Year Average	3,456	3,497	3,643	3,686	3,738	3,745	3,745	3,745	3,745	3,745	3,745	3,745	3,745	288	8.3%
Critically Dry Year Average	2,938	2,946	3,002	3,112	3,171	3,206	3,241	3,278	3,312	3,320	3,320	3,320	3,320	382	13.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,695	2,699	2,699	2,699	2,699	2,699	2,699	2,699	2,699	289	12.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,178	6,177	6,177	6,176	6,176	6,176	6,176	6,176	6,176	6,176	6,175	6,178	9	0.1%
1928-34 Dry Period Average	4,033	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	4,043	10	0.2%
Dry Year Average	5,635	5,647	5,647	5,647	5,647	5,647	5,647	5,647	5,647	5,647	5,647	5,647	5,647	12	0.2%
Critically Dry Year Average	3,480	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	3,503	23	0.7%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	NC1612	NC1613	NC1614	NC1615	NC1616	NC1617	NC1618	NC1619	NC1620	NC1621	NC1622	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,789	3,844	3,868	3,890	3,904	3,906	3,912	3,916	3,920	3,924	3,927	3,927	159	4.2%
1928-34 Dry Period Average	3,195	3,205	3,244	3,294	3,338	3,338	3,338	3,338	3,338	3,338	3,338	3,338	3,338	144	4.5%
Dry Year Average	3,456	3,488	3,620	3,662	3,702	3,737	3,742	3,742	3,742	3,742	3,742	3,742	3,742	286	8.3%
Critically Dry Year Average	2,938	2,944	2,963	3,061	3,126	3,146	3,184	3,192	3,218	3,245	3,271	3,287	3,287	349	11.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,190	6,227	6,256	6,277	6,292	6,298	6,305	6,311	6,318	6,325	6,333	6,333	164	2.7%
1928-34 Dry Period Average	4,033	4,047	4,066	4,077	4,066	4,066	4,066	4,066	4,066	4,066	4,066	4,077	4,077	44	1.1%
Dry Year Average	5,635	5,650	5,661	5,676	5,697	5,728	5,747	5,768	5,787	5,807	5,828	5,842	5,842	206	3.7%
Critically Dry Year Average	3,480	3,503	3,503	3,508	3,518	3,529	3,540	3,550	3,561	3,572	3,582	3,593	3,593	113	3.3%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,256	2,373	2,490	2,547	2,547	363	16.6%

Facilities Allocation Factor = 30%

Run Identifiers	Base 2	NC1623	NC1624	NC1625	NC1626	NC1627	NC1628	NC1629	NC1630	NC1631	NC1632	NC1633	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,782	3,827	3,850	3,865	3,877	3,889	3,897	3,900	3,902	3,904	3,907	3,907	139	3.7%
1928-34 Dry Period Average	3,195	3,201	3,229	3,262	3,290	3,290	3,290	3,290	3,290	3,290	3,290	3,290	3,290	95	3.0%
Dry Year Average	3,456	3,476	3,566	3,628	3,649	3,670	3,699	3,721	3,726	3,726	3,726	3,726	3,726	270	7.8%
Critically Dry Year Average	2,938	2,942	2,963	3,004	3,061	3,102	3,125	3,123	3,134	3,149	3,165	3,182	3,182	244	8.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,201	6,265	6,311	6,335	6,354	6,367	6,380	6,393	6,404	6,417	6,429	6,429	260	4.2%
1928-34 Dry Period Average	4,033	4,050	4,077	4,111	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114	80	2.0%
Dry Year Average	5,635	5,653	5,684	5,738	5,819	5,868	5,900	5,940	5,974	6,002	6,023	6,038	6,038	402	7.1%
Critically Dry Year Average	3,480	3,503	3,507	3,533	3,556	3,577	3,599	3,620	3,651	3,692	3,732	3,772	3,772	293	8.4%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,354	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 33%

Run Identifiers	Base 2	NC1634	NC1635	NC1636	NC1637	NC1638	NC1639	NC1640	NC1641	NC1642	NC1643	NC1644	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,775	3,801	3,823	3,835	3,841	3,847	3,854	3,860	3,866	3,872	3,876	3,876	108	2.9%
1928-34 Dry Period Average	3,195	3,196	3,212	3,229	3,243	3,243	3,243	3,243	3,243	3,243	3,243	3,243	3,243	49	1.5%
Dry Year Average	3,456	3,466	3,505	3,548	3,579	3,593	3,607	3,620	3,634	3,648	3,657	3,668	3,668	212	6.1%
Critically Dry Year Average	2,938	2,940	2,948	2,964	2,984	2,994	3,007	3,028	3,048	3,068	3,082	3,082	3,082	143	4.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,212	6,292	6,345	6,375	6,398	6,415	6,433	6,452	6,468	6,482	6,494	6,494	325	5.3%
1928-34 Dry Period Average	4,033	4,053	4,093	4,142	4,159	4,159	4,159	4,159	4,159	4,159	4,159	4,159	4,159	125	3.1%
Dry Year Average	5,635	5,657	5,726	5,847	5,919	5,969	6,010	6,035	6,053	6,056	6,083	6,120	6,120	484	8.6%
Critically Dry Year Average	3,480	3,503	3,517	3,576	3,618	3,658	3,717	3,776	3,836	3,896	3,920	3,920	3,920	440	12.7%
Minimum Annual	2,184	2,184	2,184	2,184	2,475	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	NC1645	NC1646	NC1647	NC1648	NC1649	NC1650	NC1651	NC1652	NC1653	NC1654	NC1655	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,220	6,314	6,367	6,399	6,424	6,449	6,467	6,485	6,499	6,505	6,511	6,511	342	5.5%
1928-34 Dry Period Average	4,033	4,056	4,108	4,172	4,203	4,203	4,203	4,203	4,203	4,203	4,203	4,203	4,203	169	4.2%
Dry Year Average	5,635	5,661	5,775	5,906	5,977	6,005	6,019	6,048	6,079	6,097	6,097	6,097	6,097	462	8.2%
Critically Dry Year Average	3,480	3,503	3,537	3,619	3,692	3,776	3,857	3,921	3,947	3,959	3,996	4,033	4,033	554	15.9%
Minimum Annual	2,184	2,184	2,184	2,387	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	2,547	363	16.6%

Table NC-21

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC101	NC102	NC103	NC104	NC105	NC106	NC107	NC108	NC109	NC110	NC111
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	87	303	401	452	488	520	544	564	575	583	589
1928-34 Dry Period Average	56	159	226	293	358	422	425	425	425	425	425
Dry Year Average	115	459	674	789	861	934	951	994	1,016	1,016	1,016
Critically Dry Year Average	36	125	254	385	518	601	676	697	727	764	802
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-10	-14	-14	-15	-15	-15	-17	-17	-17	-17	-17
1928-34 Dry Period Average	-27	-34	-34	-34	-34	-34	-34	-34	-34	-34	-34
Dry Year Average	-16	-28	-31	-31	-31	-31	-31	-31	-31	-31	-31
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC112	NC113	NC114	NC115	NC116	NC117	NC118	NC119	NC120	NC121	NC122
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	66	239	322	367	398	421	440	459	477	492	500
1928-34 Dry Period Average	42	126	177	228	278	327	329	329	329	329	329
Dry Year Average	86	343	505	619	674	738	780	808	808	831	869
Critically Dry Year Average	27	93	187	286	375	433	495	563	625	641	634
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	13	66	101	117	130	140	150	160	165	171	177
1928-34 Dry Period Average	-13	9	26	43	60	73	71	71	71	71	71
Dry Year Average	12	71	95	134	158	182	202	221	235	244	251
Critically Dry Year Average	-28	-10	14	46	74	94	103	114	125	144	165
Minimum Annual	0	0	0	0	0	0	121	241	356	356	356

Facilities Allocation Factor = 50%											
Run Identifiers	NC123	NC124	NC125	NC126	NC127	NC128	NC129	NC130	NC131	NC132	NC133
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	44	174	245	290	318	337	349	361	373	386	398
1928-34 Dry Period Average	28	88	121	156	190	220	216	216	216	216	216
Dry Year Average	57	225	335	426	506	549	576	601	635	661	688
Critically Dry Year Average	18	56	108	174	234	274	293	315	344	385	426
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	33	114	156	185	211	229	238	247	253	260	266
1928-34 Dry Period Average	1	40	74	108	140	173	177	177	177	177	177
Dry Year Average	34	147	198	232	258	270	270	278	280	280	292
Critically Dry Year Average	-17	30	91	155	236	300	344	382	421	463	489
Minimum Annual	0	0	0	191	384	384	384	384	384	384	384

Facilities Allocation Factor = 75%											
Run Identifiers	NC134	NC135	NC136	NC137	NC138	NC139	NC140	NC141	NC142	NC143	NC144
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	22	92	154	192	224	243	256	266	269	275	283
1928-34 Dry Period Average	14	44	62	79	96	109	90	90	90	90	90
Dry Year Average	29	110	160	204	254	302	330	358	365	388	413
Critically Dry Year Average	9	27	39	60	87	101	101	112	123	134	146
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	49	145	191	222	242	259	271	281	290	301	308
1928-34 Dry Period Average	14	71	121	170	219	269	287	287	287	287	287
Dry Year Average	53	200	257	263	265	267	294	307	308	315	315
Critically Dry Year Average	-6	95	194	317	443	543	577	619	678	707	739
Minimum Annual	0	0	267	412	412	412	412	412	412	412	648

Facilities Allocation Factor = 100%											
Run Identifiers	NC145	NC146	NC147	NC148	NC149	NC150	NC151	NC152	NC153	NC154	NC155
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	59	168	215	240	266	288	303	315	322	328	333
1928-34 Dry Period Average	24	102	168	233	299	364	397	397	397	397	397
Dry Year Average	69	245	276	275	323	374	374	374	373	373	372
Critically Dry Year Average	5	185	323	491	588	653	750	788	827	864	901
Minimum Annual	0	35	441	441	441	441	441	802	802	802	802

NC_RV01.XLS Results Net

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Table NC-22

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC201	NC202	NC203	NC204	NC205	NC206	NC207	NC208	NC209	NC210	NC211
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	53	139	168	184	189	193	193	193	193	193	193
1928-34 Dry Period Average	46	171	253	311	364	403	403	403	403	403	403
Dry Year Average	108	260	284	284	284	284	284	284	284	284	284
Critically Dry Year Average	62	273	412	518	552	577	577	577	577	577	577
Minimum Annual	0	165	486	596	821	821	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	-18	-18	-18	-19	-19	-19	-19	-19	-19	-19	-19
1928-34 Dry Period Average	4	4	4	4	4	4	4	4	4	4	4
Dry Year Average	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
Critically Dry Year Average	10	10	10	10	10	10	10	10	10	10	10
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC212	NC213	NC214	NC215	NC216	NC217	NC218	NC219	NC220	NC221	NC222
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	41	119	148	164	177	185	189	193	193	193	193
1928-34 Dry Period Average	35	129	193	236	284	324	365	403	403	403	403
Dry Year Average	83	241	270	283	283	283	283	283	283	283	283
Critically Dry Year Average	46	190	309	391	471	523	554	575	574	574	574
Minimum Annual	0	125	224	442	464	690	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	-1	41	66	79	91	101	110	118	124	127	130
1928-34 Dry Period Average	19	51	74	90	106	123	139	156	172	156	142
Dry Year Average	15	86	129	149	170	186	198	206	214	217	220
Critically Dry Year Average	22	50	69	93	121	147	167	187	208	214	221
Minimum Annual	6	30	60	90	122	156	215	275	336	396	434

Facilities Allocation Factor = 50%											
Run Identifiers	NC223	NC224	NC225	NC226	NC227	NC228	NC229	NC230	NC231	NC232	NC233
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	28	94	120	137	152	161	168	173	178	181	182
1928-34 Dry Period Average	23	88	130	164	195	226	257	287	312	313	313
Dry Year Average	56	201	237	260	283	283	283	283	283	283	283
Critically Dry Year Average	30	107	195	266	315	374	414	452	483	502	507
Minimum Annual	0	15	79	80	227	407	407	453	633	636	636
Ag & Urban Benefits											
71-Year Average	12	76	109	128	144	157	166	175	178	184	187
1928-34 Dry Period Average	31	92	135	186	199	231	264	297	273	272	272
Dry Year Average	35	151	209	234	258	275	284	293	293	294	287
Critically Dry Year Average	35	95	146	198	248	296	336	375	390	416	448
Minimum Annual	12	59	120	206	328	448	512	527	543	571	600

Facilities Allocation Factor = 75%											
Run Identifiers	NC234	NC235	NC236	NC237	NC238	NC239	NC240	NC241	NC242	NC243	NC244
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	57	83	98	108	118	124	130	134	139	143
1928-34 Dry Period Average	12	44	67	84	101	118	135	137	137	137	137
Dry Year Average	28	127	180	209	217	226	235	250	264	269	269
Critically Dry Year Average	14	50	75	112	156	197	226	238	249	265	277
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	23	98	137	156	174	190	203	211	217	222	227
1928-34 Dry Period Average	42	129	193	239	288	335	382	393	393	393	393
Dry Year Average	53	186	246	273	294	312	319	319	322	322	315
Critically Dry Year Average	48	149	238	309	385	457	522	570	606	642	680
Minimum Annual	18	90	233	412	573	624	653	727	883	883	883

Facilities Allocation Factor = 100%											
Run Identifiers	NC245	NC246	NC247	NC248	NC249	NC250	NC251	NC252	NC253	NC254	NC255
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	31	114	149	172	194	213	226	237	245	252	256
1928-34 Dry Period Average	52	163	252	315	378	438	497	532	532	532	532
Dry Year Average	69	210	253	280	302	315	322	326	326	326	319
Critically Dry Year Average	61	211	335	434	537	635	710	773	823	870	902
Minimum Annual	24	119	353	591	736	928	980	1,016	1,016	1,016	1,016

NC_RV02.XLS Results: Net

Table NC-23

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC301	NC302	NC303	NC304	NC305	NC306	NC307	NC308	NC309	NC310	NC311
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	88	304	403	454	491	522	547	566	577	583	589
1928-34 Dry Period Average	56	159	226	293	358	422	425	425	425	425	425
Dry Year Average	121	465	683	801	870	934	954	1,005	1,016	1,016	1,016
Critically Dry Year Average	36	125	254	385	521	604	676	697	729	767	804
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-33	-36	-36	-37	-37	-37	-38	-38	-38	-38	-38
1928-34 Dry Period Average	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Dry Year Average	-40	-45	-47	-47	-47	-47	-47	-47	-47	-47	-47
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC312	NC313	NC314	NC315	NC316	NC317	NC318	NC319	NC320	NC321	NC322
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	67	243	332	379	410	433	451	469	488	501	509
1928-34 Dry Period Average	42	127	177	226	278	327	322	322	322	322	322
Dry Year Average	91	348	512	640	694	746	784	812	818	850	878
Critically Dry Year Average	27	93	182	280	374	440	503	565	617	618	630
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-15	22	46	62	74	84	94	102	108	114	118
1928-34 Dry Period Average	-25	-2	14	29	45	61	71	71	71	71	71
Dry Year Average	-14	47	75	105	125	144	171	186	197	207	214
Critically Dry Year Average	-27	-4	14	33	55	76	93	108	122	134	147
Minimum Annual	6	28	54	89	119	150	183	214	266	327	387

Facilities Allocation Factor = 50%											
Run Identifiers	NC323	NC324	NC325	NC326	NC327	NC328	NC329	NC330	NC331	NC332	NC333
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	45	178	255	304	336	358	368	378	390	402	414
1928-34 Dry Period Average	28	88	122	156	190	224	208	208	208	208	208
Dry Year Average	60	230	343	437	529	589	611	640	665	689	714
Critically Dry Year Average	18	56	102	168	234	270	282	303	343	384	425
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-2	57	90	112	131	144	153	158	163	168	174
1928-34 Dry Period Average	-14	28	59	90	121	152	176	176	176	176	176
Dry Year Average	8	108	145	178	214	238	245	254	256	257	260
Critically Dry Year Average	-17	37	84	135	184	229	265	285	309	336	363
Minimum Annual	12	59	118	180	289	378	466	473	494	516	547

Facilities Allocation Factor = 75%											
Run Identifiers	NC334	NC335	NC336	NC337	NC338	NC339	NC340	NC341	NC342	NC343	NC344
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	22	96	158	198	230	254	267	280	291	297	304
1928-34 Dry Period Average	14	44	62	79	96	113	86	86	86	86	86
Dry Year Average	30	121	172	220	270	320	364	402	446	468	487
Critically Dry Year Average	9	27	39	60	84	104	98	109	121	132	143
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	8	79	116	137	155	170	183	190	197	204	210
1928-34 Dry Period Average	-5	57	102	149	197	244	287	287	287	287	287
Dry Year Average	25	146	200	229	251	266	272	273	279	283	283
Critically Dry Year Average	-7	82	166	239	313	379	439	481	520	557	594
Minimum Annual	18	88	204	371	539	568	609	668	751	851	851

Facilities Allocation Factor = 100%											
Run Identifiers	NC345	NC346	NC347	NC348	NC349	NC350	NC351	NC352	NC353	NC354	NC355
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	15	94	130	153	174	193	207	216	223	231	236
1928-34 Dry Period Average	4	86	148	210	274	335	396	408	408	408	408
Dry Year Average	41	177	232	260	282	291	295	295	295	295	295
Critically Dry Year Average	3	132	241	337	440	540	624	679	727	776	811
Minimum Annual	23	119	321	561	644	738	897	912	912	912	912

Table NC-24

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC401	NC402	NC403	NC404	NC405	NC406	NC407	NC408	NC409	NC410	NC411
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	52	137	167	184	189	193	193	193	193	193	193
1928-34 Dry Period Average	40	166	248	307	360	403	403	403	403	403	403
Dry Year Average	103	260	284	284	284	284	284	284	284	284	284
Critically Dry Year Average	58	270	409	516	550	577	577	577	577	577	577
Minimum Annual	0	165	451	586	821	821	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	6	5	5	4	4	4	4	4	4	4	4
1928-34 Dry Period Average	18	16	11	11	11	11	11	11	11	11	11
Dry Year Average	17	16	14	14	14	14	14	14	14	14	14
Critically Dry Year Average	12	12	12	12	12	12	12	12	12	12	12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC412	NC413	NC414	NC415	NC416	NC417	NC418	NC419	NC420	NC421	NC422
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	39	117	147	164	176	184	189	193	193	193	193
1928-34 Dry Period Average	30	125	186	234	280	320	361	400	403	403	403
Dry Year Average	80	236	270	283	283	283	283	283	283	283	283
Critically Dry Year Average	44	188	306	388	467	519	551	575	575	574	574
Minimum Annual	0	126	222	411	467	662	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	29	89	120	137	152	162	173	182	190	194	198
1928-34 Dry Period Average	32	71	87	104	121	138	156	172	189	161	148
Dry Year Average	43	126	167	187	202	216	223	231	238	247	253
Critically Dry Year Average	23	52	74	111	155	182	213	244	275	278	290
Minimum Annual	0	0	0	0	60	181	302	375	375	375	375

Facilities Allocation Factor = 50%											
Run Identifiers	NC423	NC424	NC425	NC426	NC427	NC428	NC429	NC430	NC431	NC432	NC433
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	27	92	118	137	151	161	167	172	177	180	181
1928-34 Dry Period Average	21	85	128	161	192	222	253	283	307	307	307
Dry Year Average	54	194	237	260	283	283	283	283	283	283	280
Critically Dry Year Average	28	105	193	264	311	370	410	444	477	495	504
Minimum Annual	0	15	79	79	203	406	406	426	593	593	593
Ag & Urban Benefits											
71-Year Average	48	135	175	201	222	238	250	261	264	269	275
1928-34 Dry Period Average	46	113	150	183	216	250	284	306	276	276	276
Dry Year Average	64	200	256	273	288	295	296	306	307	314	327
Critically Dry Year Average	35	95	175	253	338	414	476	517	538	559	581
Minimum Annual	0	0	52	287	422	422	422	422	423	423	424

Facilities Allocation Factor = 75%											
Run Identifiers	NC434	NC435	NC436	NC437	NC438	NC439	NC440	NC441	NC442	NC443	NC444
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	53	81	96	107	116	124	129	134	139	142
1928-34 Dry Period Average	10	43	65	82	100	116	134	135	135	135	135
Dry Year Average	28	115	173	204	217	224	235	249	264	266	266
Critically Dry Year Average	13	48	75	111	154	196	225	237	248	266	276
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	64	167	216	240	261	279	293	302	311	319	324
1928-34 Dry Period Average	59	154	210	260	309	359	398	396	396	396	396
Dry Year Average	83	247	295	306	312	351	379	383	385	378	378
Critically Dry Year Average	48	161	289	411	532	593	638	691	745	766	795
Minimum Annual	0	0	342	469	469	469	469	469	469	733	802

Facilities Allocation Factor = 100%											
Run Identifiers	NC445	NC446	NC447	NC448	NC449	NC450	NC451	NC452	NC453	NC454	NC455
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	74	192	237	262	288	312	329	341	347	351	357
1928-34 Dry Period Average	70	193	272	337	404	467	515	515	515	515	515
Dry Year Average	100	275	299	311	380	401	401	401	401	394	394
Critically Dry Year Average	61	248	432	582	649	787	869	908	945	982	1,019
Minimum Annual	0	106	518	518	518	571	802	802	802	802	802

Table NC-25

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC501	NC502	NC503	NC504	NC505	NC506	NC507	NC508	NC509	NC510	NC511
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	74	267	359	408	441	469	493	514	526	537	548
1928-34 Dry Period Average	42	139	206	274	341	374	374	374	374	374	374
Dry Year Average	94	394	587	698	747	810	864	889	914	940	961
Critically Dry Year Average	20	88	217	347	449	534	616	671	671	691	728
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-15	-18	-21	-24	-26	-27	-28	-28	-30	-30	-31
1928-34 Dry Period Average	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
Dry Year Average	-41	-49	-50	-53	-57	-57	-57	-58	-58	-58	-58
Critically Dry Year Average	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC512	NC513	NC514	NC515	NC516	NC517	NC518	NC519	NC520	NC521	NC522
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	56	209	286	330	357	379	397	415	434	449	458
1928-34 Dry Period Average	32	110	161	212	262	289	289	289	289	289	289
Dry Year Average	71	293	438	559	609	649	685	727	753	777	787
Critically Dry Year Average	15	66	159	257	322	371	422	483	544	588	602
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	7	70	111	137	146	150	160	164	171	178	186
1928-34 Dry Period Average	0	26	43	61	78	60	60	60	60	60	60
Dry Year Average	-17	40	89	101	118	135	163	173	191	210	225
Critically Dry Year Average	-7	6	18	30	48	52	63	74	85	96	106
Minimum Annual	0	0	0	0	0	0	0	31	152	272	363

Facilities Allocation Factor = 50%											
Run Identifiers	NC523	NC524	NC525	NC526	NC527	NC528	NC529	NC530	NC531	NC532	NC533
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	38	152	215	254	278	295	308	321	334	346	359
1928-34 Dry Period Average	21	74	108	142	176	184	184	184	184	184	184
Dry Year Average	47	189	285	364	432	485	508	537	564	592	614
Critically Dry Year Average	10	38	88	150	194	222	243	265	287	308	345
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	28	131	190	216	236	254	268	279	290	302	314
1928-34 Dry Period Average	11	54	88	122	156	156	156	156	156	156	156
Dry Year Average	6	120	175	226	290	333	387	387	401	420	436
Critically Dry Year Average	-2	23	67	131	174	196	227	270	311	345	386
Minimum Annual	0	0	0	0	217	363	363	363	363	363	363

Facilities Allocation Factor = 75%											
Run Identifiers	NC534	NC535	NC536	NC537	NC538	NC539	NC540	NC541	NC542	NC543	NC544
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	19	82	133	165	183	193	205	212	218	226	234
1928-34 Dry Period Average	11	37	55	72	89	74	74	74	74	74	74
Dry Year Average	24	91	132	176	208	218	241	267	295	323	352
Critically Dry Year Average	5	18	29	51	73	75	86	97	108	120	131
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	46	177	228	264	291	310	327	341	355	365	374
1928-34 Dry Period Average	20	80	128	179	228	250	250	250	250	250	250
Dry Year Average	27	191	293	364	383	409	423	434	452	469	472
Critically Dry Year Average	3	52	142	244	347	423	485	534	565	610	638
Minimum Annual	0	0	58	363	383	363	363	363	363	363	363

Facilities Allocation Factor = 100%											
Run Identifiers	NC545	NC546	NC547	NC548	NC549	NC550	NC551	NC552	NC553	NC554	NC555
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	61	207	262	302	333	356	368	380	389	394	400
1928-34 Dry Period Average	26	106	170	236	302	349	349	349	349	349	349
Dry Year Average	45	261	384	414	459	489	506	506	506	506	505
Critically Dry Year Average	8	97	237	405	515	580	633	683	721	759	796
Minimum Annual	0	0	293	363	363	363	363	363	363	709	853

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Table NC-26

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low Sacramento River Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC601	NC602	NC603	NC604	NC605	NC606	NC607	NC608	NC609	NC610	NC611
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	48	133	161	177	187	192	197	197	197	197	197
1928-34 Dry Period Average	38	135	198	258	312	366	417	417	417	417	417
Dry Year Average	105	271	300	300	301	301	301	301	301	301	301
Critically Dry Year Average	46	221	344	444	509	543	575	575	575	575	575
Minimum Annual	0	188	275	360	588	821	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	-44	-47	-48	-51	-51	-51	-51	-53	-53	-53	-54
1928-34 Dry Period Average	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13
Dry Year Average	-32	-44	-45	-46	-47	-47	-47	-48	-48	-48	-49
Critically Dry Year Average	18	18	18	18	18	18	18	18	18	18	18
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC612	NC613	NC614	NC615	NC616	NC617	NC618	NC619	NC620	NC621	NC622
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	37	116	143	161	171	180	188	192	193	193	193
1928-34 Dry Period Average	28	103	152	197	243	286	326	367	379	379	379
Dry Year Average	80	256	282	299	299	300	300	300	300	300	300
Critically Dry Year Average	34	147	261	340	410	464	513	540	548	548	548
Minimum Annual	0	89	90	281	343	411	591	821	821	821	821
Ag & Urban Benefits											
71-Year Average	-25	17	44	58	70	79	89	97	102	107	111
1928-34 Dry Period Average	0	25	42	59	76	93	109	113	97	97	97
Dry Year Average	-9	59	100	132	164	189	209	221	229	236	236
Critically Dry Year Average	27	51	72	97	119	143	167	185	193	209	225
Minimum Annual	2	21	45	71	132	217	301	386	391	393	395

Facilities Allocation Factor = 50%											
Run Identifiers	NC623	NC624	NC625	NC626	NC627	NC628	NC629	NC630	NC631	NC632	NC633
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	25	92	118	135	149	158	164	167	170	173	176
1928-34 Dry Period Average	19	70	103	137	167	197	226	232	232	232	232
Dry Year Average	53	215	251	273	298	298	298	298	298	298	298
Critically Dry Year Average	22	79	161	232	278	328	360	384	403	421	439
Minimum Annual	0	0	0	0	127	326	326	326	326	326	326
Ag & Urban Benefits											
71-Year Average	-11	57	90	112	130	144	154	161	167	173	176
1928-34 Dry Period Average	9	59	92	124	157	191	206	201	201	201	201
Dry Year Average	13	141	216	264	293	314	322	325	329	333	324
Critically Dry Year Average	37	86	137	197	251	299	338	357	397	424	458
Minimum Annual	6	44	123	291	409	414	417	422	426	456	502

Facilities Allocation Factor = 75%											
Run Identifiers	NC634	NC635	NC636	NC637	NC638	NC639	NC640	NC641	NC642	NC643	NC644
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	12	55	84	99	108	116	122	127	132	136	139
1928-34 Dry Period Average	10	35	53	70	87	104	109	109	109	109	109
Dry Year Average	26	128	188	217	225	232	243	257	272	278	278
Critically Dry Year Average	10	35	62	98	135	168	192	202	213	220	230
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	1	83	126	149	166	180	191	200	207	213	215
1928-34 Dry Period Average	19	91	138	187	237	286	302	302	302	302	302
Dry Year Average	35	207	291	324	337	350	362	362	360	359	349
Critically Dry Year Average	46	131	224	316	395	463	513	561	610	651	678
Minimum Annual	11	83	326	462	470	477	522	589	682	861	861

Facilities Allocation Factor = 100%											
Run Identifiers	NC645	NC646	NC647	NC648	NC649	NC650	NC651	NC652	NC653	NC654	NC655
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	11	101	144	166	187	204	217	224	229	233	236
1928-34 Dry Period Average	28	123	186	252	316	375	405	405	405	405	405
Dry Year Average	52	253	305	326	347	351	353	352	351	349	339
Critically Dry Year Average	56	185	315	436	533	628	707	757	792	826	861
Minimum Annual	16	163	495	522	575	668	904	904	904	904	904

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Table NC-27

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC701	NC702	NC703	NC704	NC705	NC706	NC707	NC708	NC709	NC710	NC711
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	77	275	367	418	448	476	501	521	532	543	554
1928-34 Dry Period Average	53	150	217	285	352	387	387	387	387	387	387
Dry Year Average	105	424	617	717	771	836	891	897	928	961	967
Critically Dry Year Average	20	88	217	347	451	537	619	671	671	694	730
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-67	-72	-74	-77	-79	-79	-79	-79	-81	-81	-82
1928-34 Dry Period Average	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33
Dry Year Average	-82	-98	-98	-98	-104	-104	-104	-104	-104	-104	-104
Critically Dry Year Average	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC712	NC713	NC714	NC715	NC716	NC717	NC718	NC719	NC720	NC721	NC722
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	58	218	299	345	372	393	411	430	448	460	467
1928-34 Dry Period Average	40	119	169	220	271	291	291	291	291	291	291
Dry Year Average	79	313	462	581	628	669	701	742	767	773	782
Critically Dry Year Average	15	65	153	252	316	361	420	481	542	567	581
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-47	-8	16	33	42	52	61	69	75	80	85
1928-34 Dry Period Average	-20	0	17	34	51	66	66	66	66	66	66
Dry Year Average	-55	1	28	63	84	112	143	166	183	199	207
Critically Dry Year Average	-11	8	29	53	76	96	108	121	137	152	167
Minimum Annual	2	20	45	69	94	121	173	258	343	371	373

Facilities Allocation Factor = 50%											
Run Identifiers	NC723	NC724	NC725	NC726	NC727	NC728	NC729	NC730	NC731	NC732	NC733
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	39	159	232	275	301	315	326	338	351	363	375
1928-34 Dry Period Average	27	80	113	147	182	184	183	183	183	183	183
Dry Year Average	53	203	306	393	475	518	535	563	590	610	626
Critically Dry Year Average	10	37	82	148	187	211	232	253	275	306	345
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-32	28	63	86	105	121	132	139	146	151	157
1928-34 Dry Period Average	-10	29	62	95	127	159	161	161	161	161	161
Dry Year Average	-30	72	137	183	228	255	263	270	282	285	289
Critically Dry Year Average	-4	37	90	152	203	251	282	312	339	368	399
Minimum Annual	6	44	94	210	376	387	391	395	398	401	416

Facilities Allocation Factor = 75%											
Run Identifiers	NC734	NC735	NC736	NC737	NC738	NC739	NC740	NC741	NC742	NC743	NC744
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	20	84	143	180	203	220	235	243	248	253	260
1928-34 Dry Period Average	13	40	58	75	92	77	74	74	74	74	74
Dry Year Average	27	100	152	194	245	288	324	337	355	371	396
Critically Dry Year Average	5	18	29	51	73	75	84	95	105	118	129
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-20	53	93	122	139	153	162	170	179	187	191
1928-34 Dry Period Average	-1	58	104	153	203	252	255	255	255	255	255
Dry Year Average	-8	138	218	259	273	282	282	283	289	292	291
Critically Dry Year Average	2	78	170	263	343	412	459	507	557	605	636
Minimum Annual	11	67	250	411	416	421	459	528	599	755	861

Facilities Allocation Factor = 100%											
Run Identifiers	NC745	NC746	NC747	NC748	NC749	NC750	NC751	NC752	NC753	NC754	NC755
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-12	72	117	141	161	178	190	199	204	209	215
1928-34 Dry Period Average	8	85	149	214	279	341	353	353	353	353	353
Dry Year Average	10	190	259	280	300	318	319	319	318	317	317
Critically Dry Year Average	9	124	251	372	476	554	625	683	717	752	787
Minimum Annual	15	92	416	445	454	537	642	881	881	881	881

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Table NC-28

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC801	NC802	NC803	NC804	NC805	NC806	NC807	NC808	NC809	NC810	NC811
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	47	128	160	176	186	191	197	197	197	197	197
1928-34 Dry Period Average	28	125	188	247	302	357	411	417	417	417	417
Dry Year Average	106	256	300	300	301	301	301	301	301	301	301
Critically Dry Year Average	39	215	337	437	502	537	571	575	575	575	575
Minimum Annual	0	188	275	289	526	785	821	821	821	821	821
Ag & Urban Benefits											
71-Year Average	8	6	6	3	3	2	2	1	1	0	0
1928-34 Dry Period Average	10	10	10	10	10	10	10	10	10	10	10
Dry Year Average	8	3	3	2	2	1	0	0	0	0	0
Critically Dry Year Average	23	23	23	23	23	23	23	23	23	23	23
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC812	NC813	NC814	NC815	NC816	NC81E	NC818	NC819	NC820	NC821	NC822
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	36	111	139	159	170	179	187	191	193	192	192
1928-34 Dry Period Average	21	95	144	188	234	278	317	358	370	370	370
Dry Year Average	80	240	273	299	299	300	300	300	300	300	300
Critically Dry Year Average	29	142	256	334	404	458	510	538	545	545	543
Minimum Annual	0	89	89	276	289	358	631	775	821	821	821
Ag & Urban Benefits											
71-Year Average	29	94	144	176	191	202	212	218	226	233	235
1928-34 Dry Period Average	20	52	69	87	104	121	138	116	101	101	101
Dry Year Average	30	95	140	176	212	248	276	292	308	322	325
Critically Dry Year Average	31	49	61	83	98	120	142	139	140	156	176
Minimum Annual	0	0	0	0	0	34	154	275	381	381	381

Facilities Allocation Factor = 50%											
Run Identifiers	NC823	NC824	NC825	NC826	NC827	NC828	NC829	NC830	NC831	NC832	NC833
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	24	86	114	133	147	158	163	166	169	172	175
1928-34 Dry Period Average	14	65	98	131	161	191	221	224	224	224	224
Dry Year Average	53	200	242	264	296	297	297	297	297	297	297
Critically Dry Year Average	18	76	157	228	271	322	360	377	396	414	432
Minimum Annual	0	0	0	0	122	289	289	289	289	289	289
Ag & Urban Benefits											
71-Year Average	50	161	219	246	266	283	294	306	317	326	338
1928-34 Dry Period Average	30	83	117	151	184	218	206	204	204	204	204
Dry Year Average	53	179	262	324	367	393	418	433	446	450	473
Critically Dry Year Average	40	74	123	188	237	300	335	375	416	457	490
Minimum Annual	0	0	0	142	384	398	398	398	398	398	398

Facilities Allocation Factor = 75%											
Run Identifiers	NC834	NC835	NC836	NC837	NC838	NC839	NC840	NC841	NC842	NC843	NC844
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	12	51	79	94	103	111	118	124	130	134	137
1928-34 Dry Period Average	7	33	50	67	84	101	106	106	106	106	106
Dry Year Average	26	114	172	202	209	223	235	249	265	275	275
Critically Dry Year Average	8	34	60	95	133	165	190	200	211	216	226
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	69	206	261	297	320	343	360	377	385	394	401
1928-34 Dry Period Average	40	114	163	212	262	307	302	302	302	302	302
Dry Year Average	74	258	375	427	448	468	511	534	542	544	544
Critically Dry Year Average	48	109	202	310	416	498	559	590	627	654	681
Minimum Annual	0	0	197	416	416	416	416	416	416	416	416

Facilities Allocation Factor = 100%											
Run Identifiers	NC845	NC846	NC847	NC848	NC849	NC850	NC851	NC852	NC853	NC854	NC855
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	86	239	297	334	363	384	396	408	412	418	423
1928-34 Dry Period Average	46	144	208	274	340	399	399	399	399	399	399
Dry Year Average	95	331	433	460	510	555	555	553	544	544	544
Critically Dry Year Average	56	161	317	484	575	627	706	744	782	820	857
Minimum Annual	0	0	434	434	434	434	434	434	846	853	853

Table NC-29

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC801	NC802	NC803	NC804	NC805	NC806	NC807	NC808	NC809	NC810	NC811
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	40	159	241	283	313	338	363	385	403	420	438
1928-34 Dry Period Average	14	67	134	157	157	157	157	157	157	157	157
Dry Year Average	22	119	284	413	490	544	602	655	682	699	734
Critically Dry Year Average	9	60	147	205	247	290	332	392	431	469	484
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-9	-9	-9	-10	-10	-10	-10	-10	-11	-11	-11
1928-34 Dry Period Average	-27	-27	-27	-27	-27	-27	-27	-27	-27	-27	-27
Dry Year Average	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC812	NC813	NC814	NC815	NC816	NC817	NC818	NC819	NC820	NC821	NC822
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	31	123	190	231	256	275	294	313	332	348	361
1928-34 Dry Period Average	10	50	100	118	118	118	118	118	118	118	118
Dry Year Average	17	82	201	317	400	444	485	527	577	607	627
Critically Dry Year Average	7	45	110	154	187	218	251	283	323	373	396
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	4	39	60	70	80	87	95	103	110	118	121
1928-34 Dry Period Average	-24	-10	7	6	6	6	6	6	6	6	6
Dry Year Average	-8	13	28	54	81	97	116	134	155	171	176
Critically Dry Year Average	-35	-26	-15	-5	6	17	28	39	50	61	72
Minimum Annual	0	0	0	0	0	0	112	232	326	326	326

Facilities Allocation Factor = 50%											
Run Identifiers	NC823	NC824	NC825	NC826	NC827	NC828	NC829	NC830	NC831	NC832	NC833
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	21	87	140	172	194	212	229	242	255	266	277
1928-34 Dry Period Average	7	34	68	71	71	71	71	71	71	71	71
Dry Year Average	11	40	105	171	235	298	348	378	406	434	446
Critically Dry Year Average	4	24	68	92	114	137	158	180	201	223	244
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	16	64	96	116	136	149	162	174	185	196	205
1928-34 Dry Period Average	-20	6	40	53	53	53	53	53	53	53	53
Dry Year Average	-1	49	98	140	177	202	217	225	232	232	232
Critically Dry Year Average	-32	-16	26	55	77	109	150	184	225	265	305
Minimum Annual	0	0	0	181	326	326	326	326	326	326	326

Facilities Allocation Factor = 75%											
Run Identifiers	NC834	NC835	NC836	NC837	NC838	NC839	NC840	NC841	NC842	NC843	NC844
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	10	46	81	104	120	134	144	154	164	173	181
1928-34 Dry Period Average	3	17	35	18	18	18	18	18	18	18	18
Dry Year Average	5	18	27	51	71	95	118	140	170	200	230
Critically Dry Year Average	2	11	22	34	45	56	67	78	90	101	112
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	25	81	115	144	164	181	193	203	214	222	231
1928-34 Dry Period Average	-17	22	72	104	104	104	104	104	104	104	104
Dry Year Average	8	91	152	190	205	207	207	214	237	257	266
Critically Dry Year Average	-30	7	70	130	193	254	316	371	402	407	430
Minimum Annual	0	0	255	326	326	326	326	326	326	326	326

Facilities Allocation Factor = 100%											
Run Identifiers	NC845	NC846	NC847	NC848	NC849	NC850	NC851	NC852	NC853	NC854	NC855
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	31	92	135	164	184	197	209	222	229	235	240
1928-34 Dry Period Average	-14	38	104	157	157	157	157	157	157	157	157
Dry Year Average	14	121	187	206	208	208	236	260	260	260	260
Critically Dry Year Average	-26	31	115	233	315	397	439	444	481	518	556
Minimum Annual	0	21	326	326	326	326	326	326	326	326	719

NC_RV08.XLS: Results - Net

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Table NC-30

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1001	NC1002	NC1003	NC1004	NC1005	NC1006	NC1007	NC1008	NC1009	NC1010	NC1011
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	27	84	115	139	146	152	157	163	163	163	163
1928-34 Dry Period Average	14	66	130	188	212	212	212	212	212	212	212
Dry Year Average	42	173	223	273	273	273	273	273	273	273	273
Critically Dry Year Average	9	76	182	244	295	330	365	399	399	399	399
Minimum Annual	0	0	0	268	288	288	288	288	288	288	288
Ag & Urban Benefits											
71-Year Average	-17	-17	-17	-18	-18	-18	-18	-18	-18	-18	-18
1928-34 Dry Period Average	7	7	7	7	7	7	7	7	7	7	7
Dry Year Average	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Critically Dry Year Average	12	12	12	12	12	12	12	12	12	12	12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1012	NC1013	NC1014	NC1015	NC1016	NC1017	NC1018	NC1019	NC1020	NC1021	NC1022
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	20	75	99	122	136	140	144	148	152	156	157
1928-34 Dry Period Average	10	50	99	146	155	156	156	156	156	156	156
Dry Year Average	32	159	190	243	273	273	273	273	273	273	273
Critically Dry Year Average	7	47	136	194	225	251	278	303	329	355	360
Minimum Annual	0	0	0	0	38	38	38	38	38	38	38
Ag & Urban Benefits											
71-Year Average	-7	16	31	42	51	59	66	72	78	84	89
1928-34 Dry Period Average	10	23	40	56	54	54	54	54	54	54	54
Dry Year Average	6	34	49	69	93	113	129	141	151	159	166
Critically Dry Year Average	14	23	36	50	61	72	82	94	107	120	133
Minimum Annual	6	30	60	90	122	153	211	270	330	359	366

Facilities Allocation Factor = 50%											
Run Identifiers	NC1023	NC1024	NC1025	NC1026	NC1027	NC1028	NC1029	NC1030	NC1031	NC1032	NC1033
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	58	81	97	109	121	128	132	134	137	140
1928-34 Dry Period Average	7	34	67	98	98	98	98	98	98	98	98
Dry Year Average	20	112	158	184	206	243	255	259	259	259	259
Critically Dry Year Average	4	26	79	141	172	193	202	220	236	254	272
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	0	34	57	74	87	97	107	116	123	128	133
1928-34 Dry Period Average	14	39	69	96	96	96	96	96	96	96	96
Dry Year Average	14	59	101	139	160	175	188	194	198	202	204
Critically Dry Year Average	17	35	66	99	123	147	172	197	221	245	271
Minimum Annual	12	59	120	200	321	360	372	387	401	417	435

Facilities Allocation Factor = 75%											
Run Identifiers	NC1034	NC1035	NC1036	NC1037	NC1038	NC1039	NC1040	NC1041	NC1042	NC1043	NC1044
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	7	31	55	67	73	80	86	93	99	105	110
1928-34 Dry Period Average	3	17	34	50	50	50	50	50	50	50	50
Dry Year Average	10	50	100	125	133	146	161	176	191	205	222
Critically Dry Year Average	2	11	27	49	71	92	113	132	142	153	156
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	5	46	74	95	108	118	126	133	141	147	154
1928-34 Dry Period Average	17	53	97	139	139	139	139	139	139	139	139
Dry Year Average	22	84	133	168	180	187	192	199	204	206	211
Critically Dry Year Average	19	49	98	151	188	224	261	298	334	375	411
Minimum Annual	18	90	226	353	370	391	418	443	464	500	576

Facilities Allocation Factor = 100%											
Run Identifiers	NC1045	NC1046	NC1047	NC1048	NC1049	NC1050	NC1051	NC1052	NC1053	NC1054	NC1055
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	9	53	86	107	117	127	136	144	152	159	165
1928-34 Dry Period Average	20	66	127	183	183	183	183	183	183	183	183
Dry Year Average	30	109	155	178	186	190	194	194	194	194	194
Critically Dry Year Average	21	68	137	208	255	305	356	409	462	509	544
Minimum Annual	24	119	343	371	401	437	477	566	700	832	832

Table NC-31

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1101	NC1102	NC1103	NC1104	NC1105	NC1106	NC1107	NC1108	NC1109	NC1110	NC1111
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	40	159	241	283	313	338	363	385	403	420	438
1928-34 Dry Period Average	14	67	134	157	157	157	157	157	157	157	157
Dry Year Average	22	119	284	413	490	544	602	656	682	699	734
Critically Dry Year Average	9	60	147	205	247	290	332	392	431	469	484
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-32	-32	-32	-33	-33	-33	-33	-33	-35	-35	-35
1928-34 Dry Period Average	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1112	NC1113	NC1114	NC1115	NC1116	NC1117	NC1118	NC1119	NC1120	NC1121	NC1122
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	31	125	195	234	259	279	298	317	336	351	364
1928-34 Dry Period Average	10	50	101	110	110	110	110	110	110	110	110
Dry Year Average	16	78	196	312	397	442	483	524	568	596	618
Critically Dry Year Average	7	45	110	149	182	214	246	278	317	354	384
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-22	0	15	28	36	44	51	58	63	70	76
1928-34 Dry Period Average	-35	-22	-5	7	7	7	7	7	7	7	7
Dry Year Average	-29	-3	9	28	48	65	81	95	111	125	137
Critically Dry Year Average	-35	-25	-12	-1	9	21	33	45	55	65	76
Minimum Annual	6	28	54	89	118	150	183	214	261	321	351

Facilities Allocation Factor = 50%											
Run Identifiers	NC1123	NC1124	NC1125	NC1126	NC1127	NC1128	NC1129	NC1130	NC1131	NC1132	NC1133
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	21	88	145	179	200	218	234	247	259	273	286
1928-34 Dry Period Average	7	34	68	62	62	62	62	62	62	62	62
Dry Year Average	12	36	102	181	237	298	351	379	408	435	462
Critically Dry Year Average	4	24	68	87	109	131	153	174	196	217	238
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-16	16	42	61	76	88	99	106	112	118	124
1928-34 Dry Period Average	-32	-6	25	50	50	50	50	50	50	50	50
Dry Year Average	-21	22	57	95	124	149	161	168	175	179	180
Critically Dry Year Average	-32	-13	16	49	70	98	121	145	169	192	220
Minimum Annual	12	59	116	180	263	353	366	376	388	399	420

Facilities Allocation Factor = 75%											
Run Identifiers	NC1134	NC1135	NC1136	NC1137	NC1138	NC1139	NC1140	NC1141	NC1142	NC1143	NC1144
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	10	46	82	106	125	136	147	156	166	176	184
1928-34 Dry Period Average	3	17	35	18	18	18	18	18	18	18	18
Dry Year Average	6	18	27	51	88	101	122	142	171	199	229
Critically Dry Year Average	2	11	22	34	45	56	67	78	90	101	112
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-10	29	58	82	96	105	114	122	129	135	142
1928-34 Dry Period Average	-26	8	53	93	93	93	93	93	93	93	93
Dry Year Average	-14	49	104	145	157	163	168	172	179	179	181
Critically Dry Year Average	-29	1	52	103	139	175	210	249	286	328	368
Minimum Annual	18	88	197	350	367	383	401	433	461	511	592

Facilities Allocation Factor = 100%											
Run Identifiers	NC1145	NC1146	NC1147	NC1148	NC1149	NC1150	NC1151	NC1152	NC1153	NC1154	NC1155
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-7	36	74	97	108	118	127	135	143	151	157
1928-34 Dry Period Average	-26	22	83	139	139	139	139	139	139	139	139
Dry Year Average	-6	78	146	171	178	183	186	188	188	188	188
Critically Dry Year Average	-27	20	90	160	208	257	307	361	414	463	501
Minimum Annual	23	119	311	368	391	423	465	546	658	831	831

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Table NC-32

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1201	NC1202	NC1203	NC1204	NC1205	NC1206	NC1207	NC1208	NC1209	NC1210	NC1211
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	27	84	115	139	146	152	157	163	163	163	163
1928-34 Dry Period Average	14	66	130	188	212	212	212	212	212	212	212
Dry Year Average	42	173	223	273	273	273	273	273	273	273	273
Critically Dry Year Average	9	76	182	244	295	330	365	399	399	399	399
Minimum Annual	0	0	0	268	288	288	288	288	288	288	288
Ag & Urban Benefits											
71-Year Average	6	6	6	6	6	6	6	6	6	6	6
1928-34 Dry Period Average	18	18	18	18	18	18	18	18	18	18	18
Dry Year Average	20	20	20	20	20	20	20	20	20	20	20
Critically Dry Year Average	12	12	12	12	12	12	12	12	12	12	12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1212	NC1213	NC1214	NC1215	NC1216	NC1217	NC1218	NC1219	NC1220	NC1221	NC1222
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	20	75	99	121	135	140	144	148	152	156	157
1928-34 Dry Period Average	10	50	99	145	155	155	155	155	155	155	155
Dry Year Average	32	159	190	242	273	273	273	273	273	273	273
Critically Dry Year Average	7	47	138	194	223	250	277	304	329	353	360
Minimum Annual	0	0	0	0	35	35	35	35	35	35	35
Ag & Urban Benefits											
71-Year Average	20	55	73	86	96	103	111	119	125	131	137
1928-34 Dry Period Average	21	35	52	69	61	61	61	61	61	61	61
Dry Year Average	28	56	70	98	118	144	166	179	191	201	207
Critically Dry Year Average	14	22	33	52	58	69	80	90	101	114	134
Minimum Annual	0	0	0	0	54	173	293	326	326	326	326

Facilities Allocation Factor = 50%											
Run Identifiers	NC1223	NC1224	NC1225	NC1226	NC1227	NC1228	NC1229	NC1230	NC1231	NC1232	NC1233
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	58	81	96	109	120	127	130	133	136	138
1928-34 Dry Period Average	7	34	67	98	98	98	98	98	98	98	98
Dry Year Average	20	112	158	183	204	240	254	259	259	259	259
Critically Dry Year Average	4	26	79	139	172	193	197	211	228	245	251
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	32	80	108	129	145	158	170	182	194	204	211
1928-34 Dry Period Average	25	51	84	107	107	107	107	107	107	107	107
Dry Year Average	36	89	136	179	206	220	234	241	241	241	241
Critically Dry Year Average	16	32	73	109	136	179	220	261	301	342	382
Minimum Annual	0	0	47	275	326	326	326	326	326	326	326

Facilities Allocation Factor = 75%											
Run Identifiers	NC1234	NC1235	NC1236	NC1237	NC1238	NC1239	NC1240	NC1241	NC1242	NC1243	NC1244
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	7	31	53	67	73	80	86	92	98	104	108
1928-34 Dry Period Average	3	17	34	50	50	50	50	50	50	50	50
Dry Year Average	10	50	94	124	132	146	160	174	186	199	214
Critically Dry Year Average	2	11	27	49	70	92	111	129	142	153	154
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	41	96	131	156	173	191	203	213	223	232	236
1928-34 Dry Period Average	28	67	114	153	153	153	153	153	153	153	153
Dry Year Average	44	120	174	209	222	224	225	232	253	275	289
Critically Dry Year Average	18	56	116	187	251	313	375	429	458	453	462
Minimum Annual	0	0	326	326	326	326	326	326	326	326	326

Facilities Allocation Factor = 100%											
Run Identifiers	NC1245	NC1246	NC1247	NC1248	NC1249	NC1250	NC1251	NC1252	NC1253	NC1254	NC1255
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	47	108	147	176	193	206	218	231	237	242	248
1928-34 Dry Period Average	31	81	146	200	200	200	200	200	200	200	200
Dry Year Average	53	142	195	212	212	216	244	264	264	264	264
Critically Dry Year Average	20	77	158	285	367	443	479	489	525	562	601
Minimum Annual	0	94	326	326	326	326	326	326	326	448	802

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Table NC-33

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1301	NC1302	NC1303	NC1304	NC1305	NC1306	NC1307	NC1308	NC1309	NC1310	NC1311
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	37	153	235	275	304	329	354	376	394	411	429
1928-34 Dry Period Average	14	67	134	154	154	154	154	154	154	154	154
Dry Year Average	15	111	277	403	476	531	586	639	665	697	740
Critically Dry Year Average	8	57	143	198	239	281	324	368	427	465	477
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-15	-16	-16	-17	-18	-19	-19	-19	-20	-20	-20
1928-34 Dry Period Average	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
Dry Year Average	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Critically Dry Year Average	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1312	NC1313	NC1314	NC1315	NC1316	NC1317	NC1318	NC1319	NC1320	NC1321	NC1322
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	28	118	183	221	246	265	284	303	322	338	352
1928-34 Dry Period Average	10	50	100	114	114	114	114	114	114	114	114
Dry Year Average	12	76	193	306	394	426	467	509	557	597	623
Critically Dry Year Average	6	43	107	148	180	210	242	274	310	355	390
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-2	35	66	79	91	100	109	116	123	124	124
1928-34 Dry Period Average	-7	7	22	8	8	8	8	8	8	8	8
Dry Year Average	-34	-23	-13	7	34	58	80	100	109	98	83
Critically Dry Year Average	-12	-12	-6	4	15	26	38	47	58	68	79
Minimum Annual	0	0	0	0	0	0	0	0	0	62	179

Facilities Allocation Factor = 50%											
Run Identifiers	NC1323	NC1324	NC1325	NC1326	NC1327	NC1328	NC1329	NC1330	NC1331	NC1332	NC1333
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	19	83	133	163	185	202	217	229	242	253	262
1928-34 Dry Period Average	7	34	67	68	68	68	68	68	68	68	68
Dry Year Average	8	36	97	159	227	286	331	352	378	401	414
Critically Dry Year Average	4	23	66	86	110	131	153	174	195	215	236
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	9	72	120	143	161	177	188	200	212	220	225
1928-34 Dry Period Average	-3	23	50	50	50	50	50	50	50	50	50
Dry Year Average	-31	0	47	104	155	200	230	264	297	302	300
Critically Dry Year Average	-12	-7	16	35	56	77	98	120	150	191	231
Minimum Annual	0	0	0	0	9	174	363	363	363	363	363

Facilities Allocation Factor = 75%											
Run Identifiers	NC1334	NC1335	NC1336	NC1337	NC1338	NC1339	NC1340	NC1341	NC1342	NC1343	NC1344
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	10	44	76	96	111	123	133	143	152	156	156
1928-34 Dry Period Average	3	17	30	18	18	18	18	18	18	18	18
Dry Year Average	5	16	24	45	67	90	112	135	159	169	178
Critically Dry Year Average	2	10	21	32	43	54	65	76	87	98	109
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	19	100	155	184	211	228	246	264	279	290	299
1928-34 Dry Period Average	0	39	88	98	98	98	98	98	98	98	98
Dry Year Average	-27	38	153	231	292	326	346	352	360	392	416
Critically Dry Year Average	-12	3	62	100	135	196	255	311	371	403	416
Minimum Annual	0	0	0	150	363	363	363	363	363	363	363

Facilities Allocation Factor = 100%											
Run Identifiers	NC1345	NC1346	NC1347	NC1348	NC1349	NC1350	NC1351	NC1352	NC1353	NC1354	NC1355
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	28	123	176	212	237	261	280	297	314	321	327
1928-34 Dry Period Average	3	55	120	150	150	150	150	150	150	150	150
Dry Year Average	-24	91	227	305	333	349	377	416	434	434	434
Critically Dry Year Average	-12	24	106	179	262	343	407	445	457	492	527
Minimum Annual	0	0	67	363	363	363	363	363	363	363	363

Table NC-34

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High Sacramento River Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1401	NC1402	NC1403	NC1404	NC1405	NC1406	NC1407	NC1408	NC1409	NC1410	NC1411
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	27	85	115	140	147	152	156	163	164	164	164
1928-34 Dry Period Average	14	66	130	186	200	200	200	200	200	200	200
Dry Year Average	41	187	230	282	288	288	288	288	288	288	288
Critically Dry Year Average	8	64	174	233	268	303	340	374	382	382	382
Minimum Annual	0	0	0	276	289	289	289	289	289	289	289
Ag & Urban Benefits											
71-Year Average	-43	-44	-44	-45	-45	-45	-45	-45	-45	-45	-45
1928-34 Dry Period Average	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
Dry Year Average	-27	-27	-27	-27	-27	-27	-27	-27	-27	-27	-27
Critically Dry Year Average	18	18	18	18	18	18	18	18	18	18	18
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1412	NC1413	NC1414	NC1415	NC1416	NC1417	NC1418	NC1419	NC1420	NC1421	NC1422
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	21	76	100	122	136	140	144	148	152	156	158
1928-34 Dry Period Average	10	50	99	145	145	145	145	145	145	145	145
Dry Year Average	31	164	205	247	281	287	287	287	287	287	287
Critically Dry Year Average	6	45	124	189	208	227	251	278	305	331	346
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-32	-8	11	25	35	44	51	59	65	70	77
1928-34 Dry Period Average	-5	8	25	38	38	38	38	38	38	38	38
Dry Year Average	-23	4	31	62	93	114	137	158	174	185	199
Critically Dry Year Average	19	28	42	56	66	78	88	98	113	129	144
Minimum Annual	2	20	45	71	106	187	270	351	368	370	372

Facilities Allocation Factor = 50%											
Run Identifiers	NC1423	NC1424	NC1425	NC1426	NC1427	NC1428	NC1429	NC1430	NC1431	NC1432	NC1433
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	58	82	98	110	122	128	131	134	137	140
1928-34 Dry Period Average	7	34	67	96	96	96	96	96	96	96	96
Dry Year Average	20	110	172	194	215	246	266	270	270	270	270
Critically Dry Year Average	4	24	67	125	166	185	182	196	214	232	250
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-25	14	43	62	78	90	101	113	124	131	139
1928-34 Dry Period Average	-2	25	58	83	83	83	83	83	83	83	83
Dry Year Average	-15	41	109	159	200	225	241	257	274	285	288
Critically Dry Year Average	21	40	76	108	133	153	193	223	253	283	314
Minimum Annual	6	44	94	253	358	371	375	379	382	386	390

Facilities Allocation Factor = 75%											
Run Identifiers	NC1434	NC1435	NC1436	NC1437	NC1438	NC1439	NC1440	NC1441	NC1442	NC1443	NC1444
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	7	32	55	67	74	81	87	93	100	105	110
1928-34 Dry Period Average	3	17	34	49	49	49	49	49	49	49	49
Dry Year Average	9	49	93	126	141	151	165	178	193	208	220
Critically Dry Year Average	2	10	25	46	57	78	99	120	139	146	146
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-18	31	65	89	106	122	133	144	151	159	163
1928-34 Dry Period Average	2	40	87	127	127	127	127	127	127	127	127
Dry Year Average	-7	83	164	216	242	264	269	281	294	296	298
Critically Dry Year Average	23	56	109	170	212	256	301	341	375	420	448
Minimum Annual	11	68	288	370	375	380	386	399	423	487	556

Facilities Allocation Factor = 100%											
Run Identifiers	NC1445	NC1446	NC1447	NC1448	NC1449	NC1450	NC1451	NC1452	NC1453	NC1454	NC1455
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-13	42	81	108	124	136	146	155	161	166	171
1928-34 Dry Period Average	5	54	117	172	172	172	172	172	172	172	172
Dry Year Average	1	121	204	241	249	258	268	268	268	268	268
Critically Dry Year Average	26	75	151	237	296	351	400	459	494	528	562
Minimum Annual	16	126	368	376	383	397	450	540	702	810	810

Table NC-35

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1501	NC1502	NC1503	NC1504	NC1505	NC1506	NC1507	NC1508	NC1509	NC1510	NC1511
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	37	154	235	275	304	329	355	377	395	412	429
1928-34 Dry Period Average	14	67	134	154	154	154	154	154	154	154	154
Dry Year Average	15	111	277	403	476	531	586	639	665	697	740
Critically Dry Year Average	8	57	143	196	239	281	324	388	427	465	477
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-65	-66	-66	-67	-68	-69	-69	-69	-70	-70	-70
1928-34 Dry Period Average	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28	-28
Dry Year Average	-74	-74	-74	-74	-74	-74	-74	-74	-74	-74	-74
Critically Dry Year Average	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1512	NC1513	NC1514	NC1515	NC1516	NC1517	NC1518	NC1519	NC1520	NC1521	NC1522
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	28	121	187	226	250	270	289	308	327	342	354
1928-34 Dry Period Average	10	50	101	107	107	107	107	107	107	107	107
Dry Year Average	12	70	185	299	382	424	485	506	546	574	597
Critically Dry Year Average	6	42	107	143	175	206	238	269	309	348	370
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-54	-29	-10	4	13	21	28	35	42	48	49
1928-34 Dry Period Average	-25	-11	6	16	16	16	16	16	16	16	16
Dry Year Average	-69	-41	-24	6	31	49	70	90	113	130	121
Critically Dry Year Average	-16	-7	6	19	30	43	55	65	75	87	102
Minimum Annual	2	20	43	69	94	119	147	224	306	367	369

Facilities Allocation Factor = 50%											
Run Identifiers	NC1523	NC1524	NC1525	NC1526	NC1527	NC1528	NC1529	NC1530	NC1531	NC1532	NC1533
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	19	85	138	171	191	207	223	237	249	260	269
1928-34 Dry Period Average	7	34	68	60	60	60	60	60	60	60	60
Dry Year Average	8	32	94	162	221	279	334	364	382	405	414
Critically Dry Year Average	4	22	65	82	104	125	147	168	189	210	231
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-46	-9	22	42	60	72	85	96	105	113	120
1928-34 Dry Period Average	-22	5	38	61	61	61	61	61	61	61	61
Dry Year Average	-60	-10	48	96	146	174	196	213	229	236	240
Critically Dry Year Average	-14	5	41	74	97	128	159	188	218	248	277
Minimum Annual	6	43	93	172	333	371	375	378	382	386	393

Facilities Allocation Factor = 75%											
Run Identifiers	NC1534	NC1535	NC1536	NC1537	NC1538	NC1539	NC1540	NC1541	NC1542	NC1543	NC1544
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	10	44	77	101	115	128	138	148	157	165	173
1928-34 Dry Period Average	3	17	35	18	18	18	18	18	18	18	18
Dry Year Average	5	16	24	48	71	90	111	133	163	193	222
Critically Dry Year Average	2	10	21	32	43	54	65	76	87	98	109
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-39	9	43	69	87	101	113	123	131	137	144
1928-34 Dry Period Average	-18	20	66	105	105	105	105	105	105	105	105
Dry Year Average	-53	33	113	168	193	211	215	225	237	237	239
Critically Dry Year Average	-12	22	76	135	179	223	267	305	343	390	432
Minimum Annual	11	67	209	370	375	380	386	401	443	510	581

Facilities Allocation Factor = 100%											
Run Identifiers	NC1545	NC1546	NC1547	NC1548	NC1549	NC1550	NC1551	NC1552	NC1553	NC1554	NC1555
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-35	21	62	89	106	119	130	140	146	151	156
1928-34 Dry Period Average	-15	34	98	152	152	152	152	152	152	152	152
Dry Year Average	-45	73	163	208	219	228	238	238	238	238	238
Critically Dry Year Average	-9	43	121	206	265	320	369	433	471	504	538
Minimum Annual	15	92	364	376	383	397	450	540	645	810	810

Table NC-36

Upstream of Delta Off-Stream Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	NC1601	NC1602	NC1603	NC1604	NC1605	NC1606	NC1607	NC1608	NC1609	NC1610	NC1611
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	27	85	118	140	147	152	158	163	164	164	164
1928-34 Dry Period Average	14	66	130	186	200	200	200	200	200	200	200
Dry Year Average	41	187	230	282	288	288	288	288	288	288	288
Critically Dry Year Average	8	64	174	233	268	303	340	374	382	382	382
Minimum Annual	0	0	0	275	289	289	289	289	289	289	289
Ag & Urban Benefits											
71-Year Average	9	8	8	8	8	8	8	8	8	8	8
1928-34 Dry Period Average	10	10	10	10	10	10	10	10	10	10	10
Dry Year Average	12	12	12	12	12	12	12	12	12	12	12
Critically Dry Year Average	23	23	23	23	23	23	23	23	23	23	23
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	NC1612	NC1613	NC1614	NC1615	NC1616	NC1617	NC1618	NC1619	NC1620	NC1621	NC1622
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	21	76	100	122	135	140	144	148	152	156	159
1928-34 Dry Period Average	10	50	99	144	144	144	144	144	144	144	144
Dry Year Average	31	164	206	246	280	286	286	286	286	286	286
Critically Dry Year Average	6	44	123	188	208	226	253	280	307	333	349
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	21	58	90	108	123	128	136	142	149	156	164
1928-34 Dry Period Average	13	27	44	32	32	32	32	32	32	32	32
Dry Year Average	15	25	41	61	92	112	133	152	172	192	206
Critically Dry Year Average	23	23	28	39	49	60	71	81	92	103	113
Minimum Annual	0	0	0	0	0	0	0	72	189	306	363

Facilities Allocation Factor = 50%											
Run Identifiers	NC1623	NC1624	NC1625	NC1626	NC1627	NC1628	NC1629	NC1630	NC1631	NC1632	NC1633
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	14	58	82	97	109	121	128	131	134	136	139
1928-34 Dry Period Average	7	34	67	95	95	95	95	95	95	95	95
Dry Year Average	20	110	171	192	214	243	265	270	270	270	270
Critically Dry Year Average	4	24	56	122	164	187	185	196	210	227	244
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	32	96	142	165	185	198	211	224	235	248	260
1928-34 Dry Period Average	16	43	77	80	80	80	80	80	80	80	80
Dry Year Average	18	49	103	184	233	264	305	339	367	388	402
Critically Dry Year Average	23	28	54	77	98	119	140	172	213	253	293
Minimum Annual	0	0	0	0	170	363	363	363	363	363	363

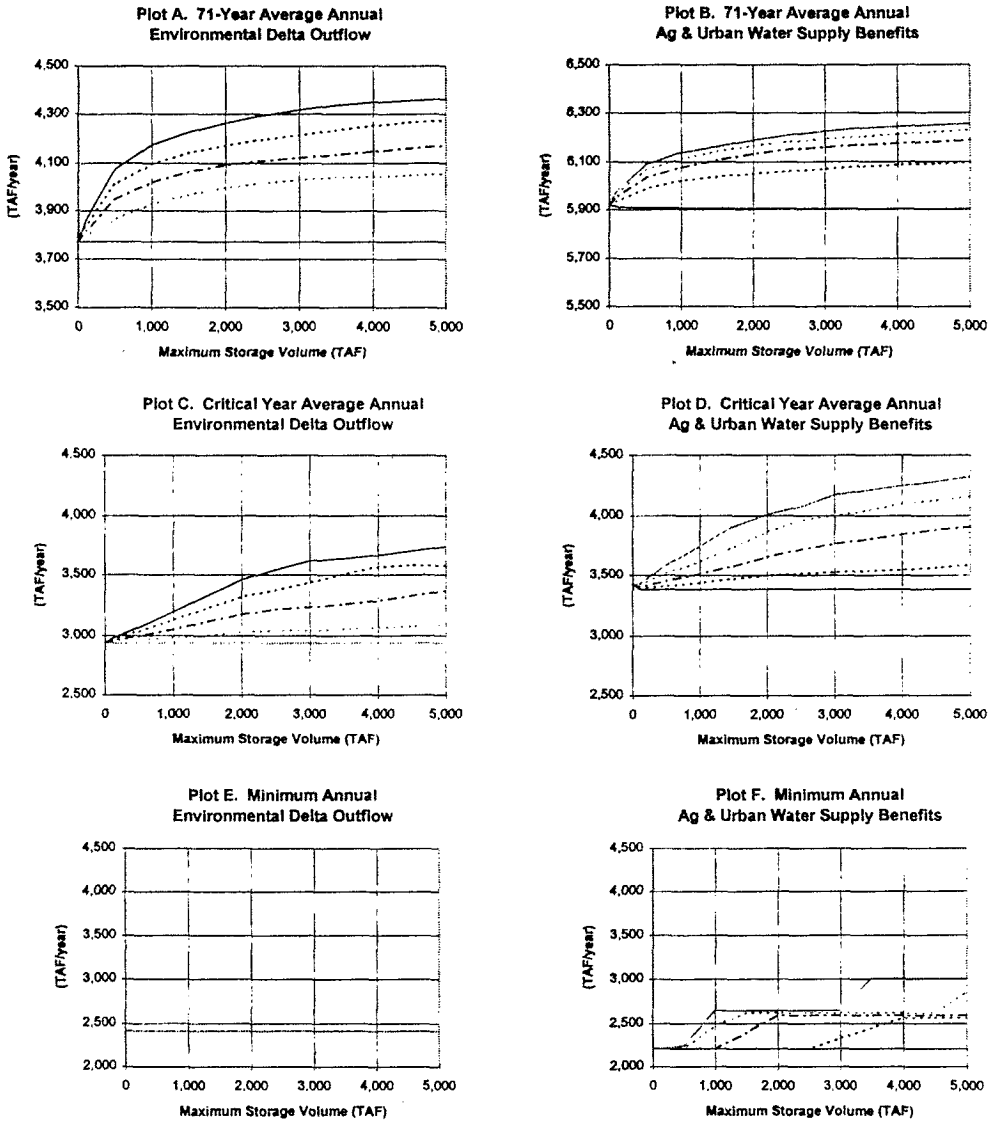
Facilities Allocation Factor = 75%											
Run Identifiers	NC1634	NC1635	NC1636	NC1637	NC1638	NC1639	NC1640	NC1641	NC1642	NC1643	NC1644
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	7	32	54	66	73	79	85	92	98	103	108
1928-34 Dry Period Average	3	17	34	49	49	49	49	49	49	49	49
Dry Year Average	9	49	92	122	136	150	164	178	192	200	212
Critically Dry Year Average	2	10	25	45	56	69	89	110	130	143	143
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	43	123	176	206	229	246	264	283	299	313	325
1928-34 Dry Period Average	20	59	108	125	125	125	125	125	125	125	125
Dry Year Average	21	90	211	283	333	375	399	417	419	447	484
Critically Dry Year Average	23	37	96	138	178	237	297	356	416	440	440
Minimum Annual	0	0	0	291	363	363	363	363	363	363	363

Facilities Allocation Factor = 100%											
Run Identifiers	NC1645	NC1646	NC1647	NC1648	NC1649	NC1650	NC1651	NC1652	NC1653	NC1654	NC1655
Maximum Storage Volume (TAF)	100	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	51	145	198	230	255	279	298	315	330	336	342
1928-34 Dry Period Average	23	75	139	169	169	169	169	169	169	169	169
Dry Year Average	26	140	271	342	370	384	413	444	462	462	462
Critically Dry Year Average	23	58	139	213	296	377	441	467	479	516	554
Minimum Annual	0	0	203	363	363	363	363	363	363	363	363

Figure NC-9

Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S. R. Flow Event Target



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

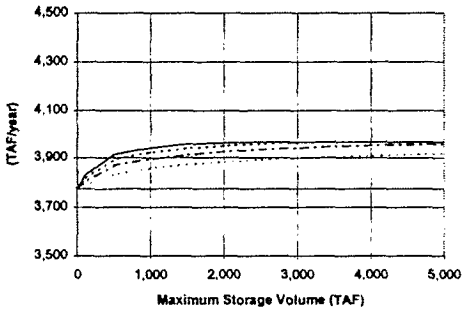
NC_RV01.XLS 6 Charts

Figure NC-10

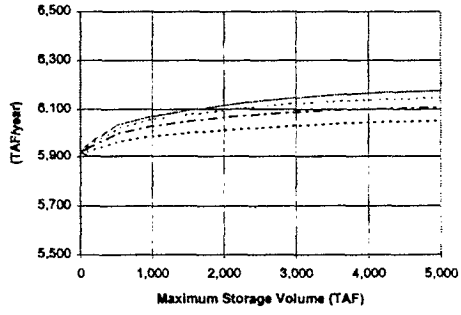
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

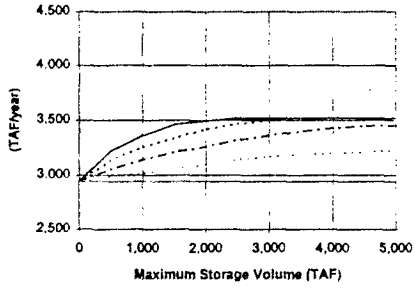
Plot A. 71-Year Average Annual Environmental Delta Outflow



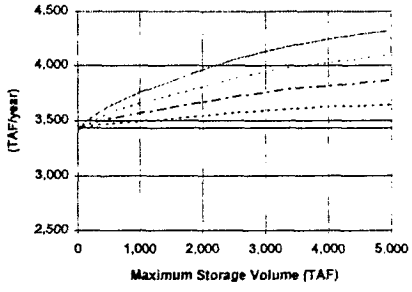
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



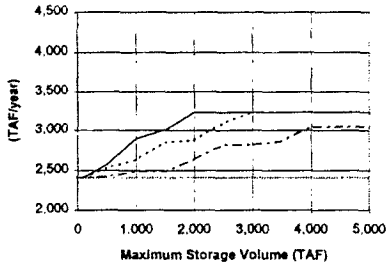
Plot C. Critical Year Average Annual Environmental Delta Outflow



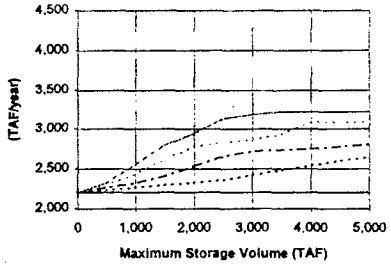
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

NC_RV02.XLS: 6 Charts

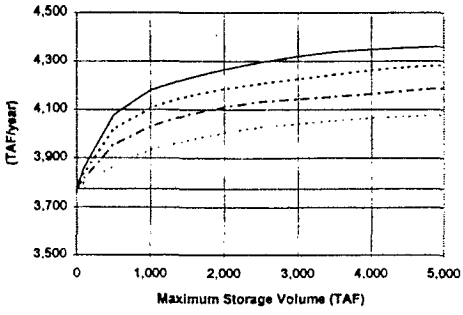
D-006672

Figure NC-11

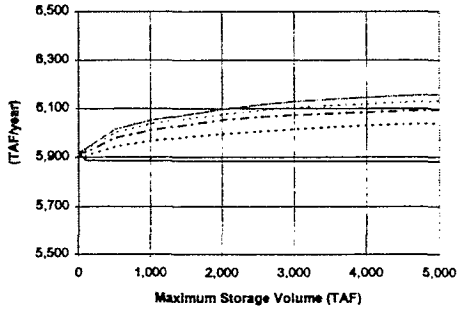
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

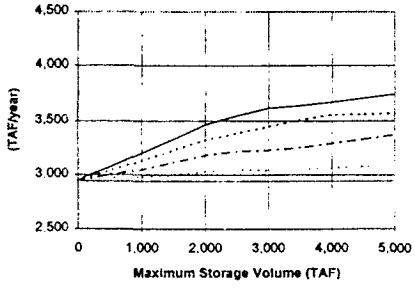
Plot A. 71-Year Average Annual Environmental Delta Outflow



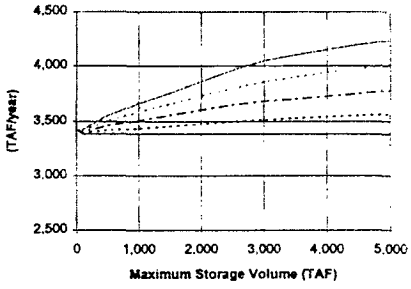
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



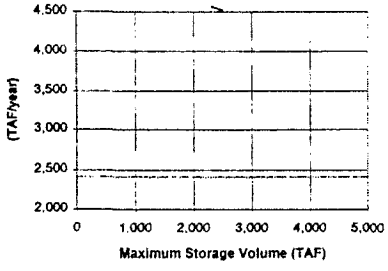
Plot C. Critical Year Average Annual Environmental Delta Outflow



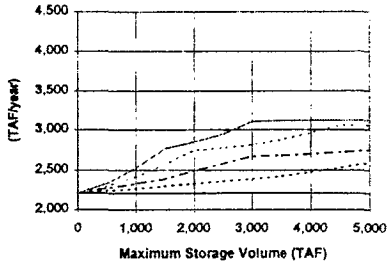
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV03.XLS 6 Charts

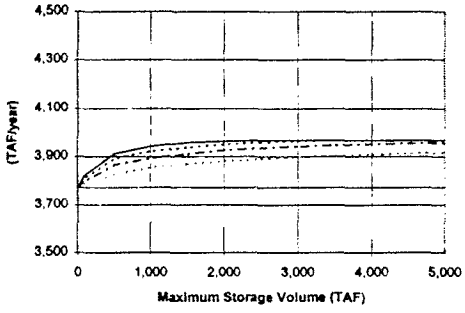
D-006673

Figure NC-12

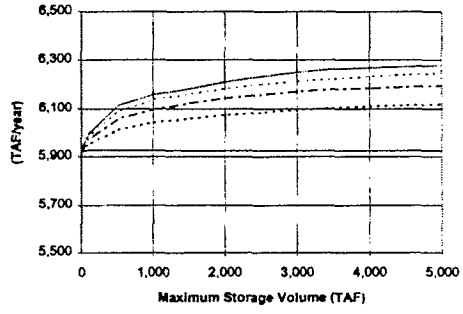
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and Low S.R. Flow Event Target

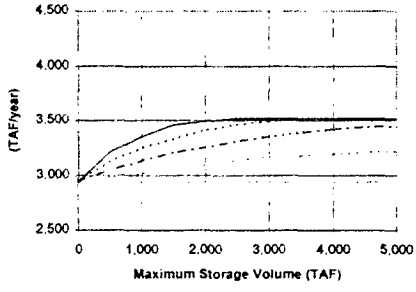
Plot A. 71-Year Average Annual
Environmental Delta Outflow



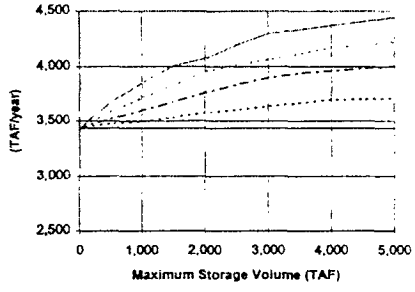
Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



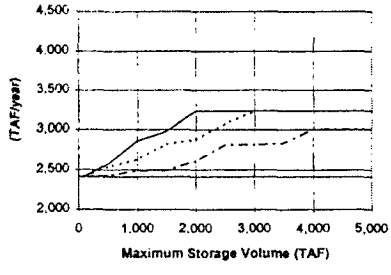
Plot C. Critical Year Average Annual
Environmental Delta Outflow



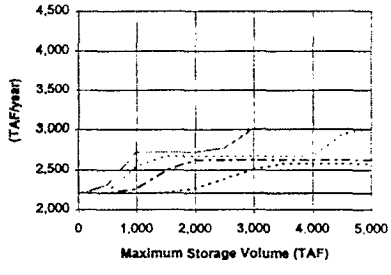
Plot D. Critical Year Average Annual
Ag & Urban Water Supply Benefits



Plot E. Minimum Annual
Environmental Delta Outflow



Plot F. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

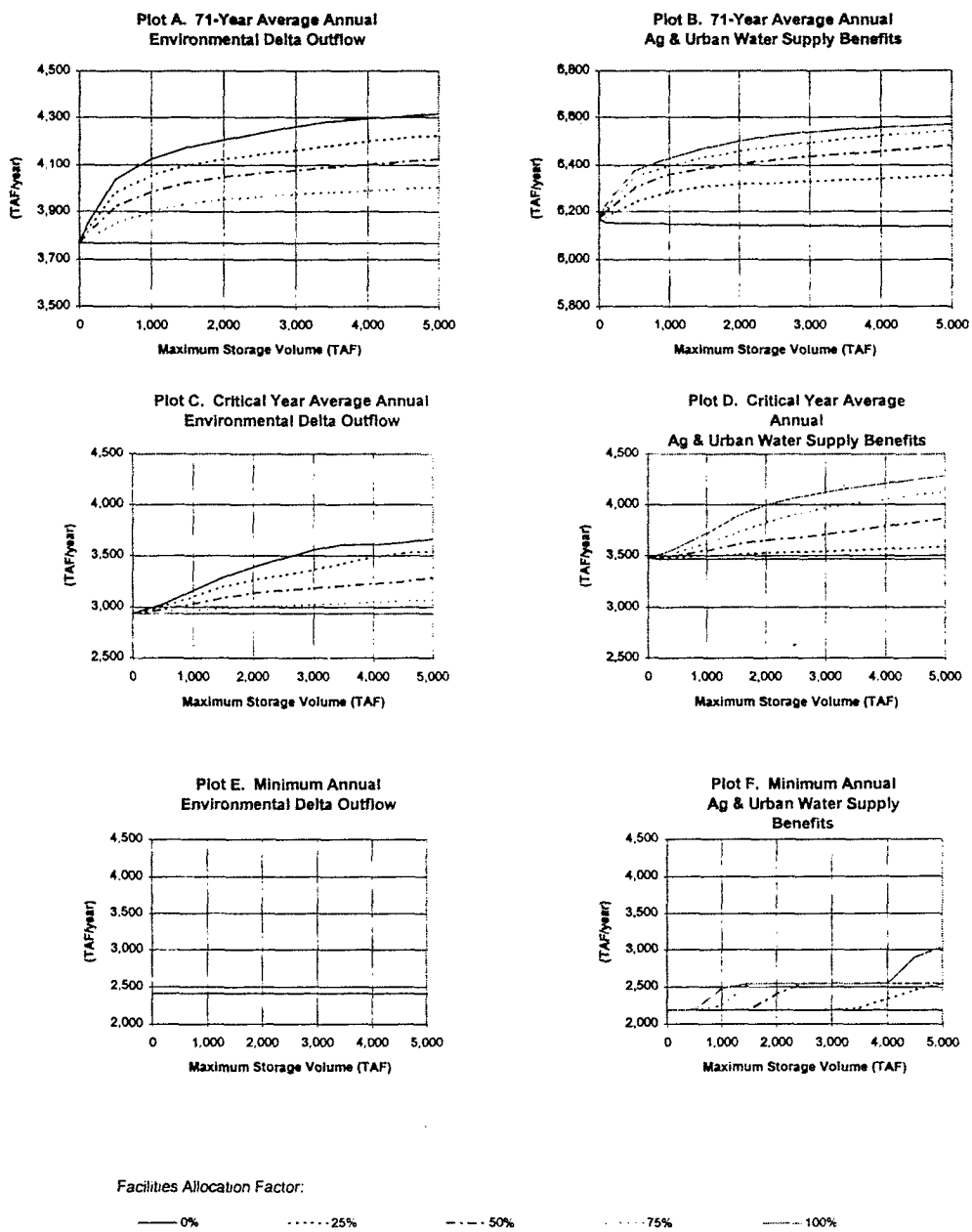
NC_RV04.XLS: 6 Char

D-006674

Figure NC-13

Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

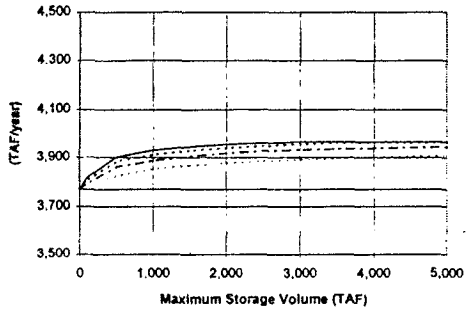
NC_RV05 XLS 6 Charts

Figure NC-14

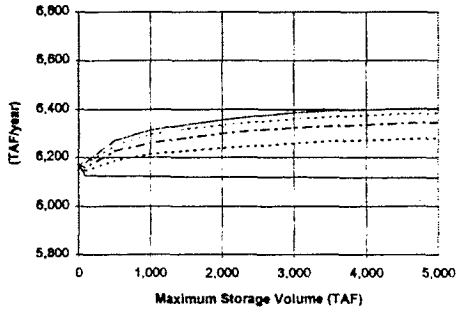
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low Sacramento River Flow Event Target

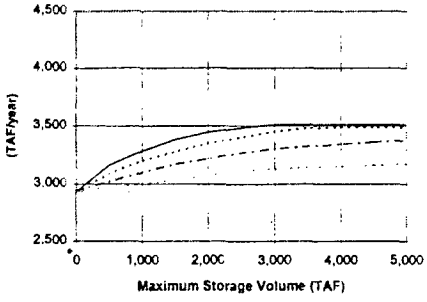
Plot A. 71-Year Average Annual Environmental Delta Outflow



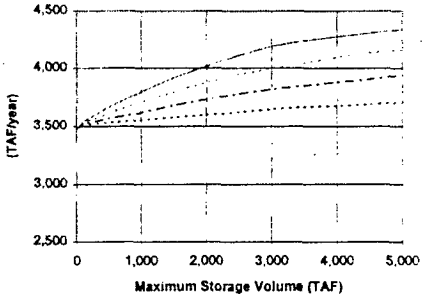
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



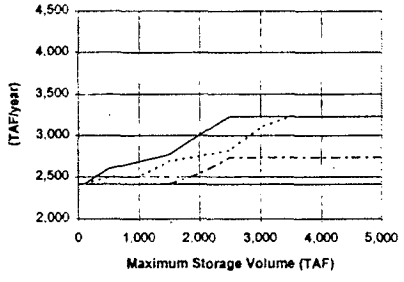
Plot C. Critical Year Average Annual Environmental Delta Outflow



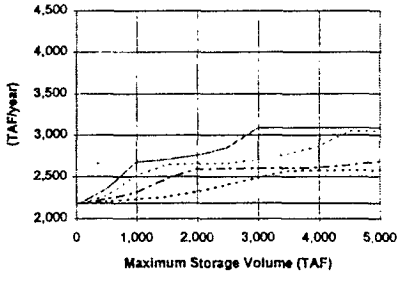
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

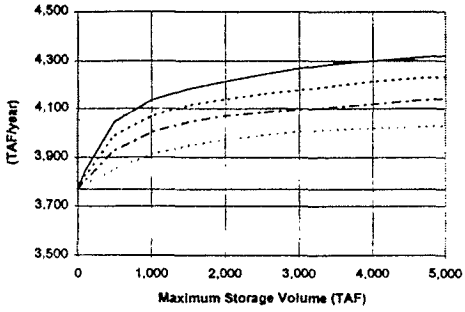
NC_RV06.XLS 6 Charts

Figure NC-15

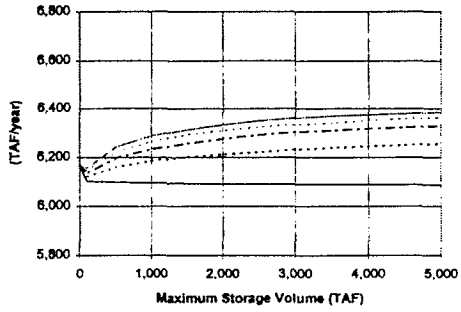
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target

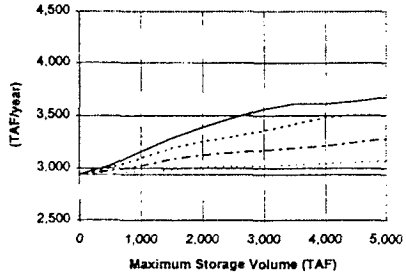
Plot A. 71-Year Average Annual
Environmental Delta Outflow



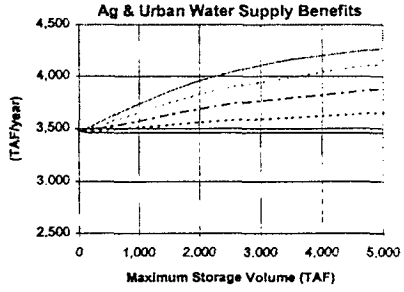
Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



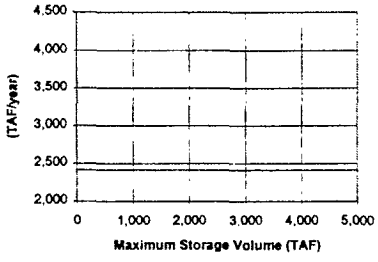
Plot C. Critical Year Average Annual
Environmental Delta Outflow



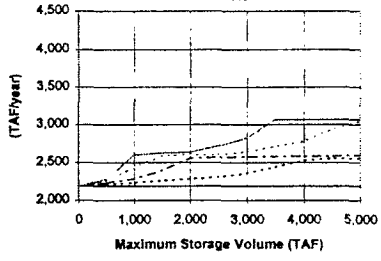
Plot D. Critical Year Average
Annual
Ag & Urban Water Supply Benefits



Plot E. Minimum Annual
Environmental Delta Outflow



Plot F. Minimum Annual
Ag & Urban Water Supply
Benefits



Facilities Allocation Factor:

0% ····· 25% – – – 50% ····· 75% ——— 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

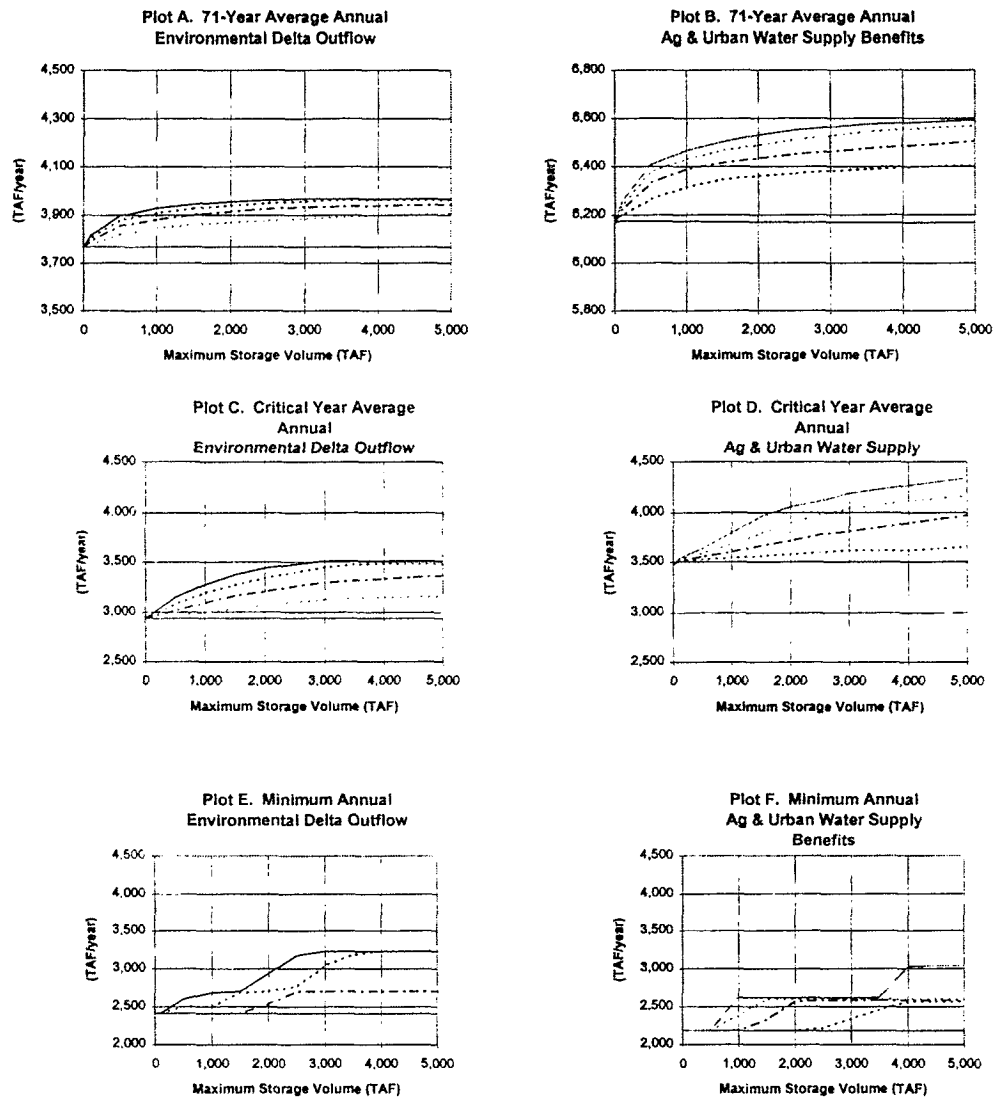
NC_RV07.XLS 6 Charts

D-006677

Figure NC-16

Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and Low S. R. Flow Event Target



Facilities Allocation Factor:

—— 0% ------25% —·—·50% ·····75% —— 100%

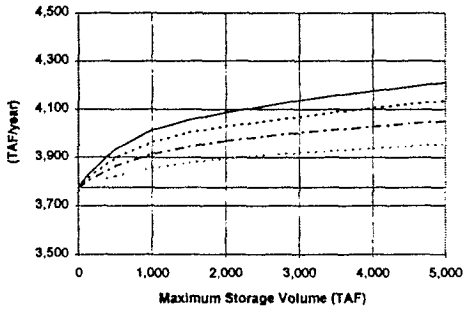
Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

Figure NC-17

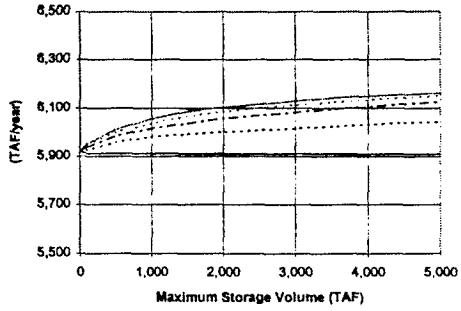
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S. R. Flow Event Target

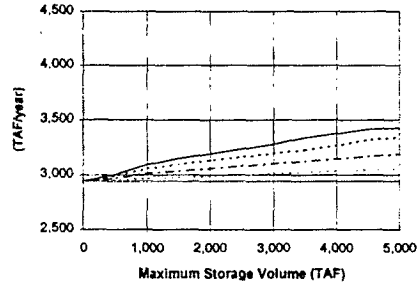
Plot A. 71-Year Average Annual
Environmental Delta Outflow



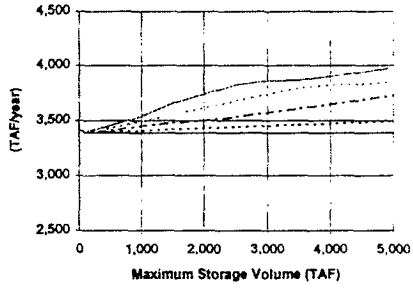
Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



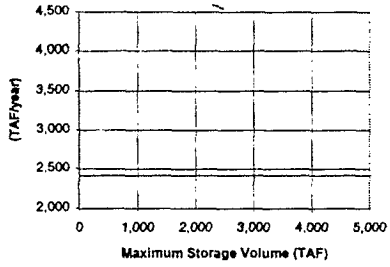
Plot C. Critical Year Average Annual
Environmental Delta Outflow



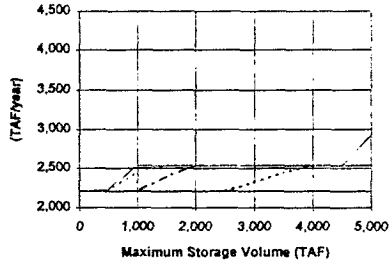
Plot D. Critical Year Average Annual
Ag & Urban Water Supply Benefits



Plot E. Minimum Annual
Environmental Delta Outflow



Plot F. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV09.XLS 6 Charts

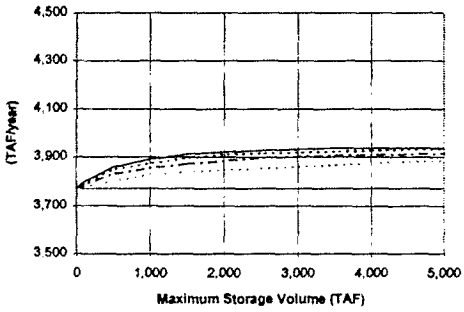
D-006679

Figure NC-18

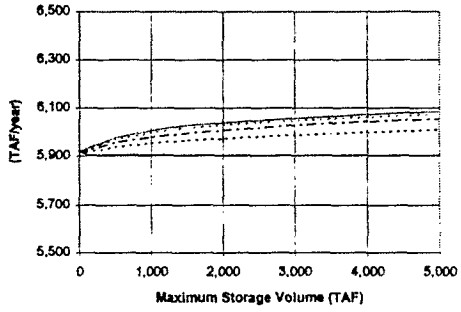
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

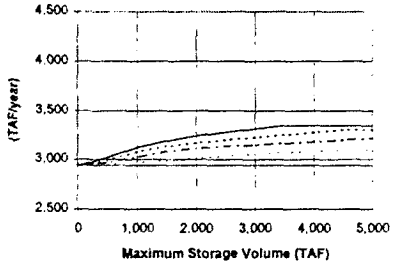
Plot A. 71-Year Average Annual Environmental Delta Outflow



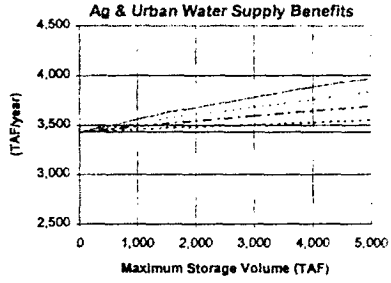
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



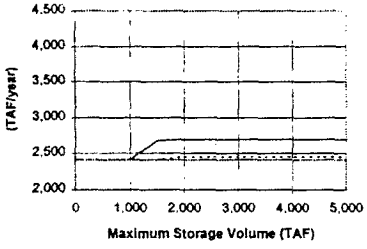
Plot C. Critical Year Average Annual Environmental Delta Outflow



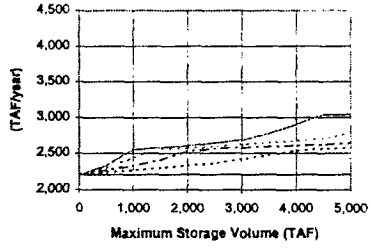
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

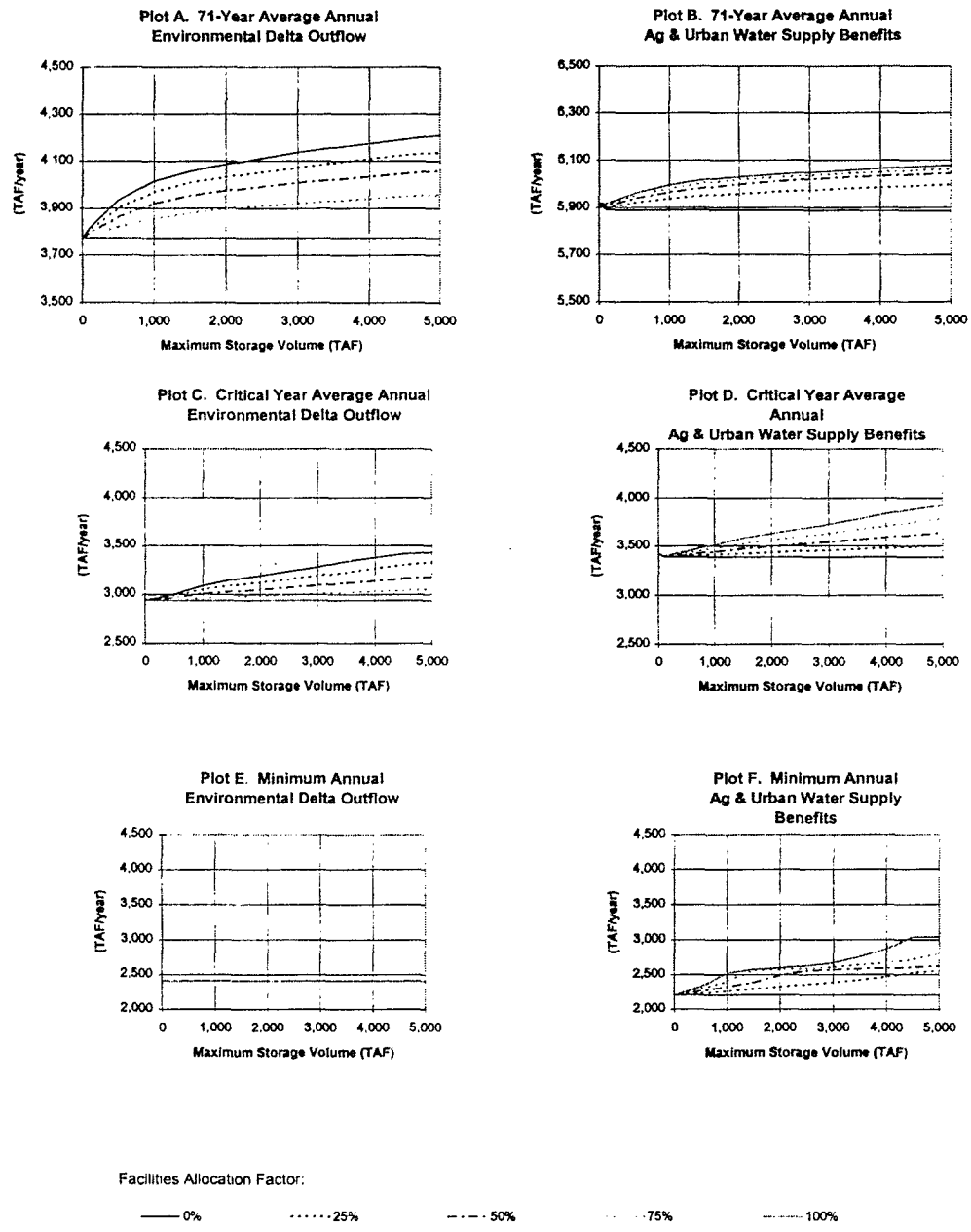
Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water suppl,
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_Rv10.XLS 6 Chart

Figure NC-19

Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

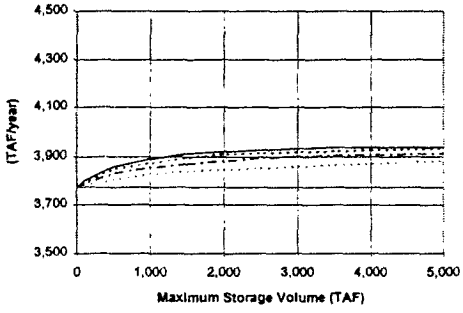
NC_RV11 XLS 6 Charts

Figure NC-20

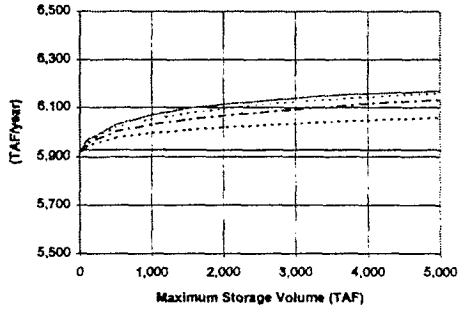
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Existing Banks PP Capacity and High S.R. Flow Event Target

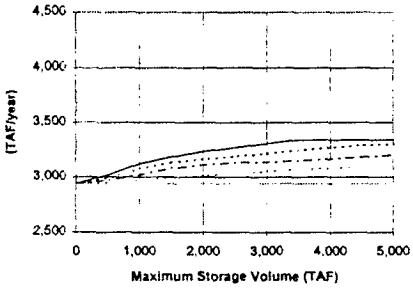
Plot A. 71-Year Average Annual
Environmental Delta Outflow



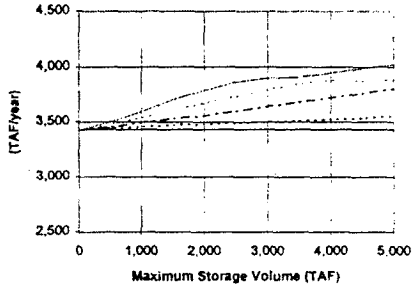
Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



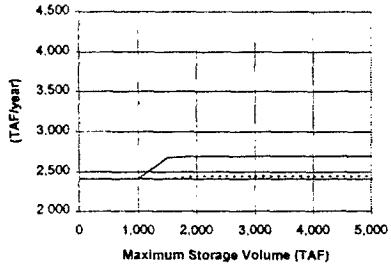
Plot C. Critical Year Average Annual
Environmental Delta Outflow



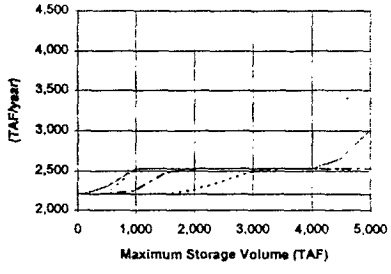
Plot D. Critical Year Average Annual
Ag & Urban Water Supply Benefits



Plot E. Minimum Annual
Environmental Delta Outflow



Plot F. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV12.XLS: 6 Charts

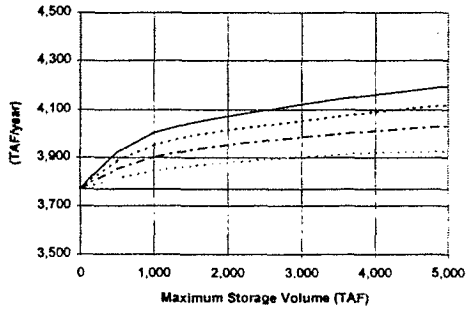
D-006682

Figure NC-21

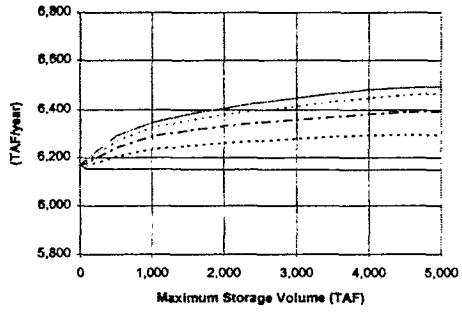
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

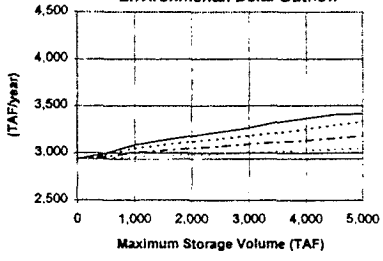
Plot A. 71-Year Average Annual Environmental Delta Outflow



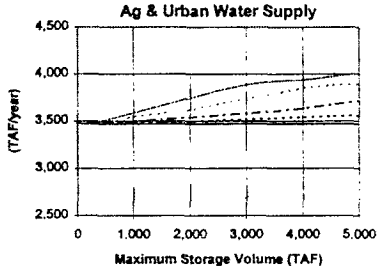
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



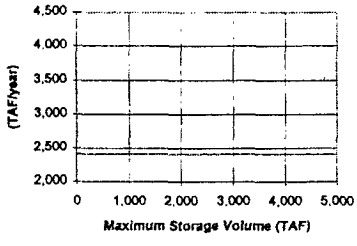
Plot C. Critical Year Average Annual Environmental Delta Outflow



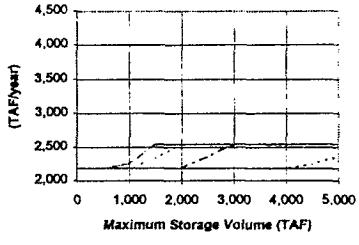
Plot D. Critical Year Average Annual Ag & Urban Water Supply



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV13.XLS: 6 Charts

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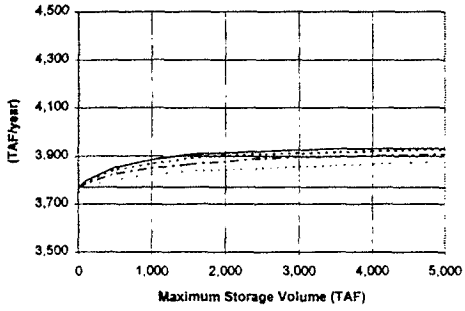
Figure NC-22

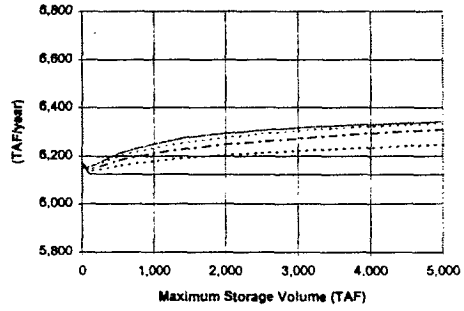
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High Sacramento River Flow Event Target

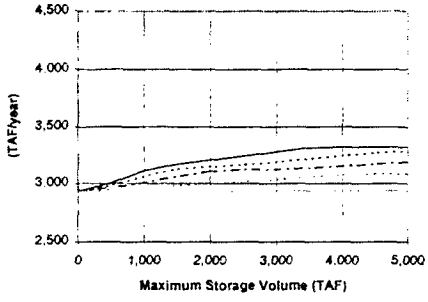
Plot A. 71-Year Average Annual
Environmental Delta Outflow



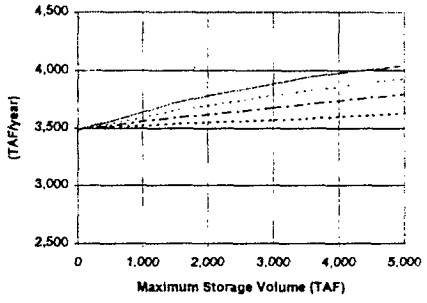
Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



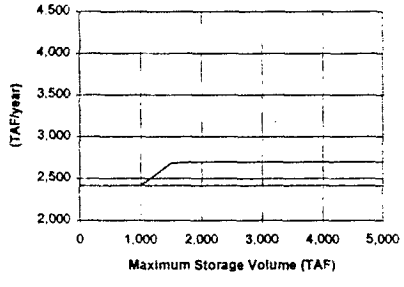
Plot C. Critical Year Average Annual
Environmental Delta Outflow



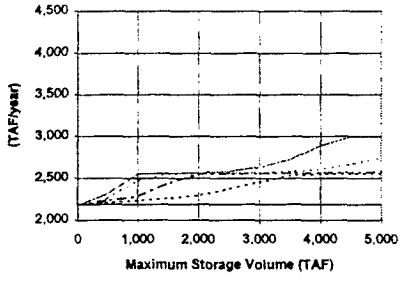
Plot D. Critical Year Average Annual
Ag & Urban Water Supply Benefits



Plot E. Minimum Annual
Environmental Delta Outflow



Plot F. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

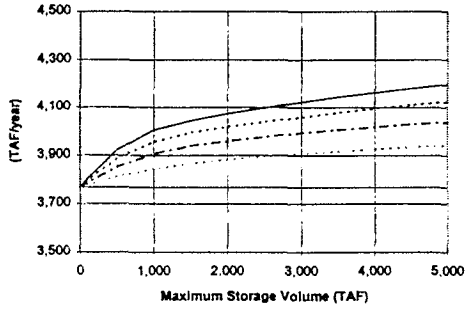
NC_RV14.XLS 6 Charts

Figure NC-23

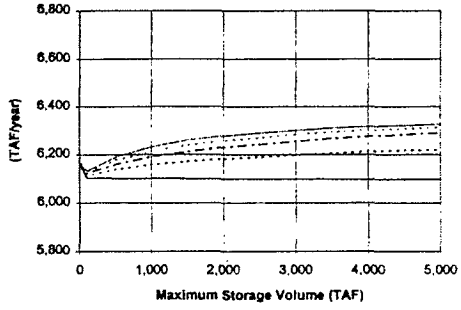
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

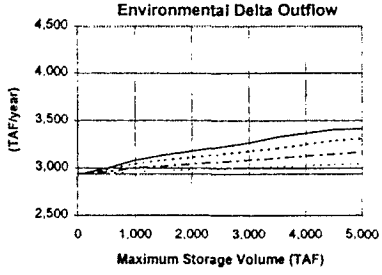
Plot A. 71-Year Average Annual Environmental Delta Outflow



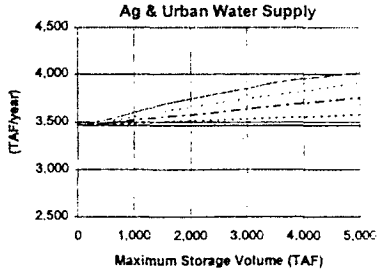
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



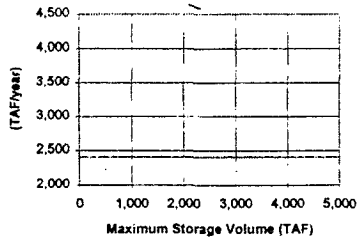
Plot C. Critical Year Average Annual Environmental Delta Outflow



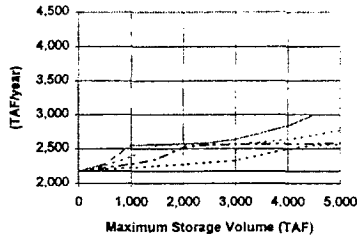
Plot D. Critical Year Average Annual Ag & Urban Water Supply



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

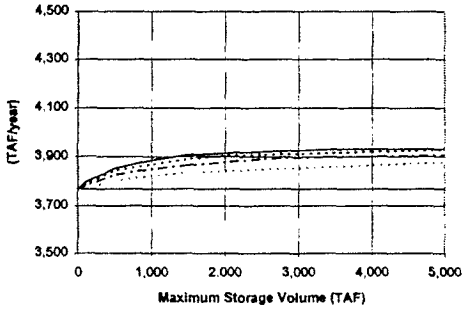
NC_RV15.XLS 6 Charts

Figure NC-24

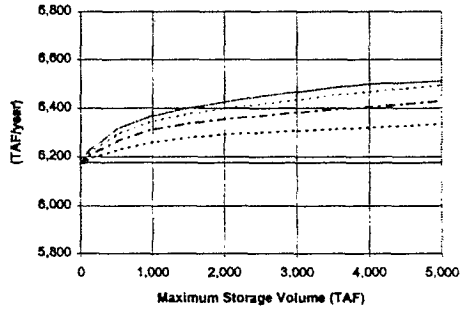
Upstream of Delta Off-Stream Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
5000 cfs Storage Inflow/Outflow Conveyance Capacity
With Expanded Banks PP Capacity and High S. R. Flow Event Target

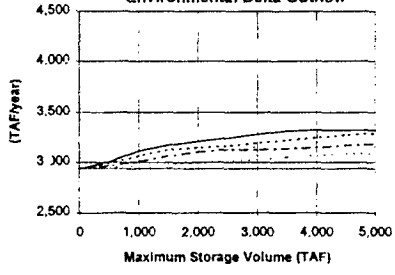
Plot A. 71-Year Average Annual Environmental Delta Outflow



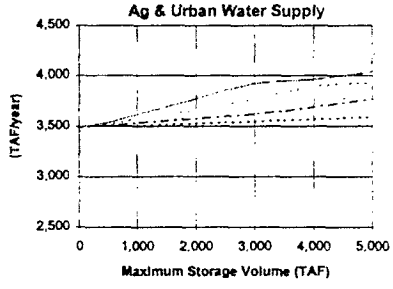
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



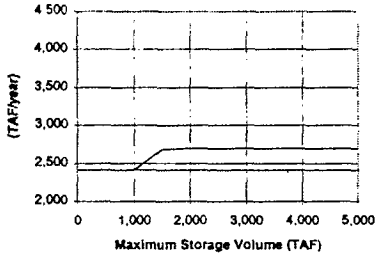
Plot C. Critical Year Average Annual Environmental Delta Outflow



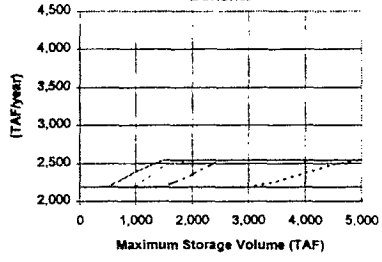
Plot D. Critical Year Average Annual Ag & Urban Water Supply



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

NC_RV16.XLS 6 Chart<

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SOUTH OF DELTA

D—006687

D-006687

Initial Sensitivity Evaluation of Operational Parameters and Storage Capacities Using the CALFED Post-Processing Operations Model

South of Delta Off-Aqueduct Storage Facilities

COMBINED ENVIRONMENTAL -- AGRICULTURAL AND URBAN WATER SUPPLY EVALUATION

Introduction

Environmental water supply benefits from new south of Delta storage facilities would be achieved by instituting an exchange with south of Delta agricultural and urban water users. Delta water would be diverted to new storage facilities during times of high flows and concurrent low-impacts to the Delta ecosystem. Under the exchange arrangement, stored water would be released from the new storage facilities to meet existing downstream agricultural and urban water supply needs. In return, agricultural and urban water users would forego a like amount of exports that would have occurred from the Delta. This exchange would take place when additional flows were needed for environmental purposes in the Delta.

Agricultural and urban water supply benefits from new south of Delta storage facilities would be achieved in a similar manner. As described above, Delta water would be diverted for storage during times of high flows and concurrent low-impacts to the Delta ecosystem. This stored water would be released directly for use during periods of need. As opposed to storage releases for environmental purposes, there would be no direct exchange for increased Delta flows through new limits in Delta pumping. The capacity of the new storage facility, rules governing diversions into storage, and operational goals (e.g. maximum normal period supply or maximum dry period supply) all affect the magnitude of potential water supply benefits for environmental or agricultural and urban purposes.

The CALFED spreadsheet operations model was used to evaluate effects of various operational rules and physical capacities of new south of Delta storage facilities on potential combined environmental -- agricultural and urban water supply benefits. In preceding studies, separate evaluations were conducted to identify potential benefits from south of Delta storage facilities dedicated to environmental water supply and agricultural and urban water supply. In each of these studies, four sets of parameters were developed which collectively bracket ranges of potential operations. These four sets of parameters define two operational goals implemented under two external conditions.

The first operational goal modeled is to maximize supplies over normal hydrologic periods. This goal is achieved by imposing no storage carryover requirement and releasing water from storage whenever unmet demand exists. A by-product of this type of operation is that supplies in storage are often depleted when entering critically dry periods. The second operational goal is to maximize supplies in the driest years of normal hydrologic sequences. This goal is achieved by imposing carryover requirements or limiting the amount of water delivered from storage in any

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given year. While this type of operation usually results in relatively larger quantities of water in storage for use during extended dry periods, overall long-term water deliveries are diminished.

The two external conditions considered in this evaluation address the capacity of Banks Pumping Plant, the State Water Project Delta pumping facility. Capacity of Banks Pumping Plant significantly affects storage operations under both the normal period supply and dry period supply operational goals considered in this evaluation. Under the first external condition, existing Banks Pumping Plant capacity is assumed. Under the second external condition, an expanded Banks Pumping Plant capacity as proposed in the Department of Water Resources South Delta Improvements Plan is assumed.

Because either environmental or agricultural and urban storage could be operated for either Normal Period Supply or Dry Period Supply, a total of eight operation conditions were evaluated in this study. These eight operation conditions, defined by the two operational goals for each water supply type under the two Banks Pumping Plant capacities, are described in Table SC-1.

In this evaluation, a facilities allocation factor was used to direct the portion of storage capacity and inflow/outflow conveyance capacity dedicated to environmental water supply and agricultural and urban water supply purposes. This facilities allocation factor was defined such that 0 percent indicates all facilities are dedicated to environmental purposes while 100 percent indicates that all facilities are dedicated to agricultural and urban water supply purposes. Any factor ranging from 0 to 100 percent may be input into the model. Under the assumptions built into the model, the storage capacity for either purpose (total capacity multiplied by the appropriate facilities allocation factor) always remains dedicated to that purpose alone. On the other hand, the inflow/outflow conveyance capacity for either purpose is only dedicated as a first priority to that purpose. If conveyance capacity dedicated to either environmental or agricultural and urban purposes is not in use, it may be employed for the other purpose. To evaluate combined environmental - agricultural and urban water supply operations, the parameter sets for the eight operation conditions described in Table SC-1 were employed to estimate water supply benefits under facilities allocation factors of 0, 25, 50, 75, and 100 percent and maximum storage capacities ranging from 100 taf to 3.0 maf.

As described in previous evaluations, in these studies a minimum Delta outflow target of 12,000 cfs for the months of January through June is used as a surrogate for environmental water demands. Because the CALFED spreadsheet operations model uses a monthly time step, more detailed evaluation of flows is not possible with this tool. However, in actual operation, the volume of water released from storage towards the 12,000 cfs target might be used to create higher pulses of flow for shorter durations, if this operation was deemed more environmentally beneficial.

Using this target minimum Delta outflow surrogate approach, environmental water supply benefits are measured in this evaluation by averaging monthly flow rates up to a maximum of 12,000 cfs for January through June of each water year. Any flow above 12,000 cfs is not counted as part of the environmental water supply benefits. Note that the result of this

Table SC-1
Bracketing Operational Conditions

Condition	Description
1	Existing Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation This condition assumes that diversions to south of Delta storage are limited by existing Banks Pumping Plant capacity and that both environmental storage and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.
2	Existing Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation This condition assumes that diversions to south of Delta storage are limited by existing Banks Pumping Plant capacity and that both environmental storage and agricultural and urban storage are operated to provide maximum supplies in critically dry years.
3	Existing Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation This condition assumes that diversions to south of Delta storage are limited by existing Banks Pumping Plant capacity, environmental storage is operated to provide maximum supplies over normal hydrologic periods, and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
4	Existing Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation This condition assumes that diversions to south of Delta storage are limited by existing Banks Pumping Plant capacity, environmental storage is operated to provide maximum supplies in critically dry years, and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

Table SC-1 (Continued)
Bracketing Operational Conditions

Condition	Description
5	Expanded Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation This condition assumes that diversions to south of Delta storage are supplemented by an increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan and that both environmental storage and agricultural and urban storage are operated to provide maximum supplies over normal hydrologic periods.
6	Expanded Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation This condition assumes that diversions to south of Delta storage are supplemented by an increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan and that both environmental storage and agricultural and urban storage are operated to provide maximum supplies in critically dry years.
7	Expanded Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Agricultural and Urban Storage: Dry Period Supply Operation This condition assumes that diversions to south of Delta storage are supplemented by an increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan, environmental storage is operated to provide maximum supplies over normal hydrologic periods, and agricultural and urban storage is operated to provide maximum supplies in critically dry years.
8	Expanded Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Agricultural and Urban Storage: Normal Period Supply Operation This condition assumes that diversions to south of Delta storage are supplemented by an increased Banks Pumping Plant capacity as proposed in the Department of Water Resources Interim South Delta Improvement Plan, environmental storage is operated to provide maximum supplies in critically dry years, and agricultural and urban storage is operated to provide maximum supplies over normal hydrologic periods.

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computation is significantly lower than and not comparable to *total* average annual Delta outflow. For simplicity in this evaluation, this average of January through June Delta outflows up to 12,000 cfs is termed *Environmental Delta Outflow*.

As also described in previous evaluations, in these studies south of Delta SWP and CVP demands are used as a surrogate for agricultural and urban water supply demands. In actual practice, agricultural and urban water supply benefits from south of Delta storage might be designated to a subset of SWP and CVP users, other south of Delta agricultural and urban users, or upstream of Delta users through a water exchange program.

Five statistical measures of water supply benefits for either environmental purposes or agricultural and urban purposes are included in this analysis, as described in Table SC-2. Water supply benefits, as described by these five measures, were estimated for each of the eight sets of operation conditions, over the ranges of maximum storage volumes and facilities allocation factors. While this information should not be considered definitive, this evaluation illustrates the potential for combined environmental - agricultural and urban water supply benefits from south of Delta storage facilities and the effects of various operation conditions. The information developed in this evaluation may be used to provide an initial refinement of the range of storage volumes of potential south of Delta storage facilities which should be considered in future studies.

Summary

This evaluation provides initial quantitative information on combined environmental - agricultural and urban water supply benefits that might be provided by new south of Delta storage facilities. Additional information on water quality benefits, interaction with other potential new storage and conveyance facilities, costs of new storage facilities, and environmental acceptability of new storage facilities must all be considered in a further refinement of this evaluation. Potential water supply benefits under each of the eight operation conditions were evaluated separately and described in the following section of this report. Some general observations drawn from this study are summarized here.

1. Adding any new storage facilities has significant impacts on agricultural and urban water supply benefits due to reductions in delivery of SWP Interruptible Supply water. Under the terms of the Monterey Agreement, whenever project water is available for delivery to SWP contractors that is not needed for fulfilling approved entitlement water deliveries or for meeting SWP operational commitments, including storage goals for the current or following years, SWP contractors may take delivery of these water supplies in proportion to their respective annual Table A entitlement. For the purposes of this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP Table A entitlement water. Adding new storage capacity -- for either environmental or agricultural and urban water supply purposes -- will reduce the availability of unallocated surplus Delta water and thereby reduce the quantity of SWP Interruptible Supply deliveries. If the new

Table SC-2
Statistical Measures
of
Environmental and Agricultural and Urban Water Supply Benefits

Measure	Description
1	71-Year Average Annual Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits. Annual average over the historical hydrologic sequence used in the model simulations.
2	1928-34 Critical Dry Period Average Annual Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits. Annual average over the seven year critical dry period.
3	Average Dry Year Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits. Annual average over the sixteen water years classified as dry years within the 71-year hydrologic sequence.
4	Average Critically Dry Year Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits. Annual average over the eleven water years classified as critically dry years within the 71-year hydrologic sequence.
5	Minimum Annual Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits. The minimum annual quantity that occurs over the 71-year hydrologic sequence.

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storage capacity is designated for agricultural and urban purposes, this interruptible supply will be replaced by more reliable base contractual water supply deliveries. If the new storage capacity is designated for environmental purposes, net decreases are seen in total agricultural and urban water supply benefits.

This effect is pronounced under the expanded Banks Pumping Plant capacity condition, due to the higher level of SWP Interruptible Supply deliveries that would occur without new storage facilities. An example of this effect is seen in model runs with a 3.0 maf maximum storage capacity and Normal Period Supply Operation goals for both environmental water supply and agricultural and urban water supply. Under these conditions and the facilities allocation factor set at 0 percent, a net loss of 83 taf occurs in 71-Year Average Annual Agricultural and Urban Water Supply benefits. With the facilities allocation factor raised to 25 percent, this loss is recovered and a net gain of 24 taf is attained in 71-Year Average Annual Agricultural and Urban Water Supply benefits.

2. Potential benefits for both environmental water supply and agricultural and urban water supply from south of Delta off-aqueduct storage are significantly enhanced with expanded Banks Pumping Plant capacity under any combination of operational goals and storage capacities. Consider as an example a 2.0 maf maximum storage capacity facility, a facilities allocation factor of 50 percent, and Normal Period Supply goals for both environmental storage and agricultural and urban storage. Under these conditions and with existing Banks Pumping Plant capacity, a net increase in 71-Year Average Annual Environmental Delta Outflow of 78 taf and a net decrease in 71-Year Average Annual Agricultural and Urban Water Supply of 13 taf occur. Under the same maximum storage capacity, facilities allocation factor, and operational goals, with expanded Banks Pumping Plant capacity, net increases in 71-Year Average Annual Environmental Delta Outflow of 156 taf and 71-Year Average Annual Agricultural and Urban Water Supply of 108 taf are attained. Similar improvements in benefits are attained with expanded Banks Pumping Plant capacity under other combinations of operational goals.

3. With both environmental storage and agricultural and urban storage operated for Normal Period Supply goals, cumulative benefits (as measured by 71-Year Average Annual Environmental Delta Outflow and 71-Year Average Annual Agricultural and Urban Water Supply) continue to increase as maximum storage capacity increases. Although incremental benefits decrease towards the upper end of the range of maximum storage capacities evaluated, under this type of operation there is no obvious limit to effective storage capacity below 3.0 maf. For any given maximum storage capacity, relative benefits to environmental water supply and agricultural and urban water supply are roughly proportional to the facilities allocation factor. For example, with expanded Banks Pumping Plant capacity and a 2.0 maf maximum storage capacity, as the facilities allocation factor is increased through the range of 0, 25, 50, 75, and 100 percent, 71-Year Average Annual Environmental Delta Outflow decreases through the range of 270, 218, 156, 84, and 0 taf and 71-Year Average Annual Agricultural and Urban Water Supply

increases through the range of -80, 29, 108, 188, and 270 taf. While caution should be taken in directly comparing relative benefits to environmental water supply and agricultural and urban water supply, it is clear that deliveries from storage to either type of use increase in a fairly linear relationship with the share of storage dedicated to that type of use.

As displayed in Figure SC-1, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 50 percent. Under these conditions, a net increase to 71-Year Average Annual Environmental Delta Outflow of 174 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 116 taf are achieved.

4. With both environmental storage and agricultural and urban storage operated for Dry Period Supply goals, only minor combined benefits (as measured by Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply) are possible with existing Banks Pumping Plant capacity. With expanded Banks Pumping Plant capacity, combined benefits are more significant, but disproportionate to maximum storage capacity and facilities allocation factor. The maximum potential Minimum Annual Environmental Delta Outflow decreases dramatically as the facilities allocation factor is increased from 25 to 50 percent. No benefits to Minimum Annual Environmental Delta Outflow are achieved with a facilities allocation factor of 75 percent. Compared to Minimum Annual Environmental Delta Outflow, Minimum Annual Agricultural and Urban Water Supply Benefits increase more linearly with maximum storage capacity. Incremental benefits increase throughout the range of maximum storage capacities evaluated for facilities allocation factors of 25 through 100 percent. However, as with Minimum Annual Environmental Delta Outflow, benefits decrease dramatically as the facilities allocation factor is decreased from 50 to 25 percent.

Under combined Dry Period Supply Operations, expanded Banks Pumping Plant capacity, and a facilities allocation factor of 0 percent, Minimum Annual Environmental Delta Outflow reaches a maximum with a maximum storage capacity of 1.0 maf. With facilities allocation factors of 75 and 100 percent, Minimum Annual Agricultural and Urban Water Supply Benefits reach a near-maximum with storage capacities of 1.5 and 2.0 maf, respectively. Increases in both Minimum Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply are achieved only with facilities allocation factors of 25 and 50 percent. With these facilities allocation factors, combined Minimum Annual benefits increase throughout the range of maximum storage capacities evaluated. As shown in Figure SC-2, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and facilities allocation factors of 25 or 50 percent. With a 25 percent facilities allocation factor, a net increase to Minimum Annual Environmental Delta Outflow of 308 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 169 taf are achieved. With a 50 percent facilities allocation factor, a net increase to Minimum Annual Environmental Delta

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Outflow of 77 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 397 taf are achieved.

5. With environmental storage operated for Normal Period Supply and agricultural and urban storage operated for Dry Period Supply, only minor combined water supply benefits are possible with existing Banks Pumping Plant capacity. With facilities allocation factors of 25 through 75 percent, near-maximum combined benefits to 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply are attained with a maximum storage capacity of 1.0 maf. With expanded Banks Pumping Plant capacity, combined benefits to 71-Year Average Annual Environmental Delta Outflow and Minimum Annual Agricultural and Urban Water Supply increase throughout the range of maximum storage capacities evaluated. As displayed in Figure SC-3, with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 50 percent, a net increase to 71-Year Average Annual Environmental Delta Outflow of 188 taf and a net increase to Minimum Annual Agricultural and Urban Water Supply of 354 taf are attained.

6. With environmental storage operated for Dry Period Supply and agricultural and urban storage operated for Normal Period Supply, no significant combined water supply benefits are attained with existing Banks Pumping Plant capacity. With expanded Banks Pumping Plant capacity, maximum increases to Minimum Annual Environmental Delta Outflow are achieved with a maximum storage capacity of 1.25 maf for facilities allocation factors of 25 and 50 percent. Benefits are reduced significantly as the facilities allocation factor is increased from 25 to 50 percent. No increases to Minimum Annual Environmental Delta Outflow are attained with a facilities allocation factor of 75 percent. 71-Year Average Annual Agricultural and Urban Water Supply increases throughout the range of maximum storage capacities evaluated for facilities allocation factors of 25 to 75 percent. As shown in Figure SC-4, maximum combined benefits are attained with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 25 percent. Under these conditions, a net increase to Minimum Annual Environmental Delta Outflow of 289 taf and a net increase to 71-Year Average Annual Agricultural and Urban Water Supply of 120 taf are achieved.

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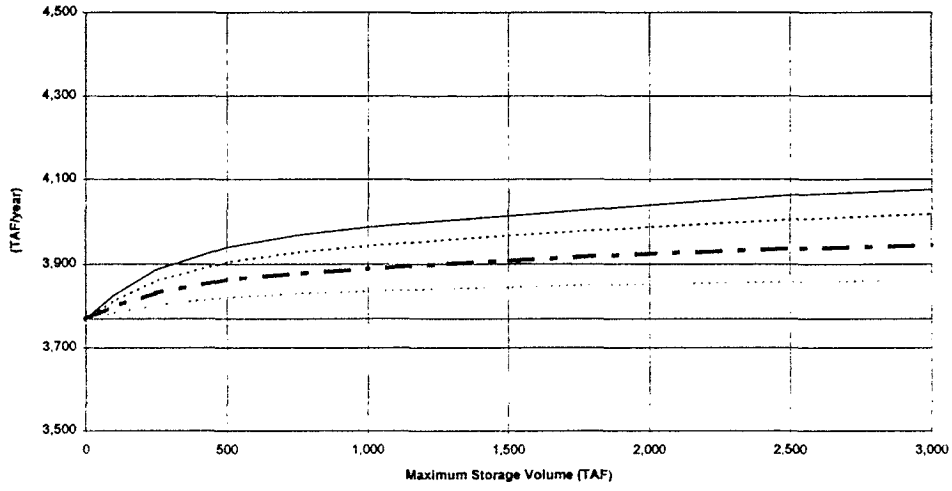
Figure SC-1

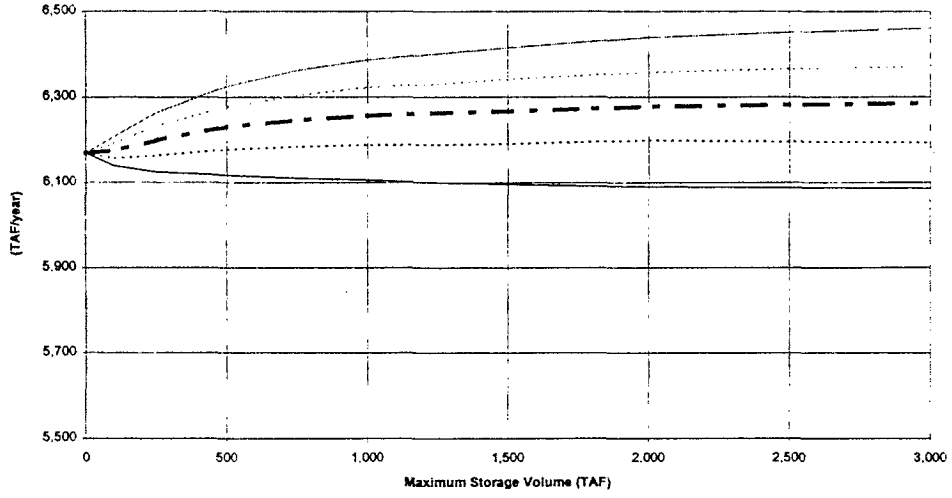
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

SC_RV5.XLS 2 Charts

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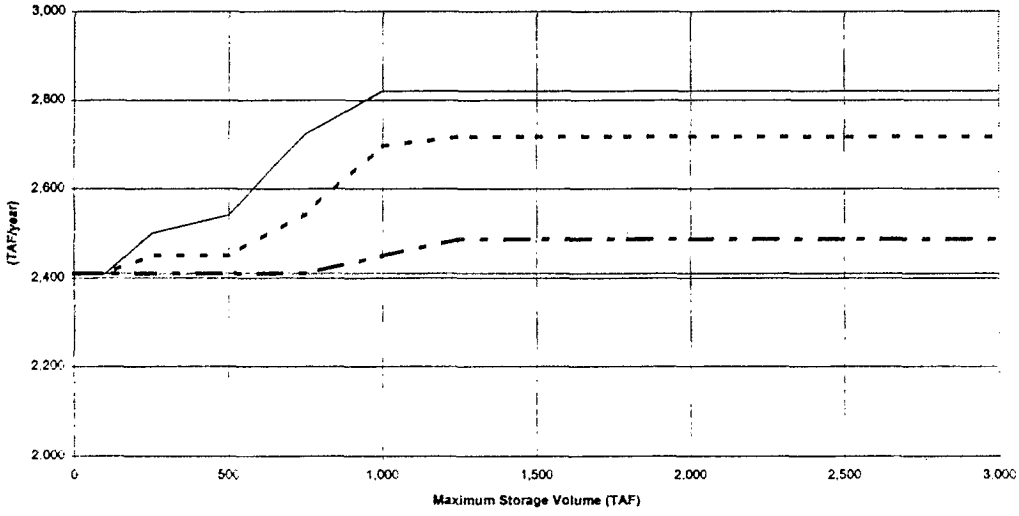
Figure SC-2

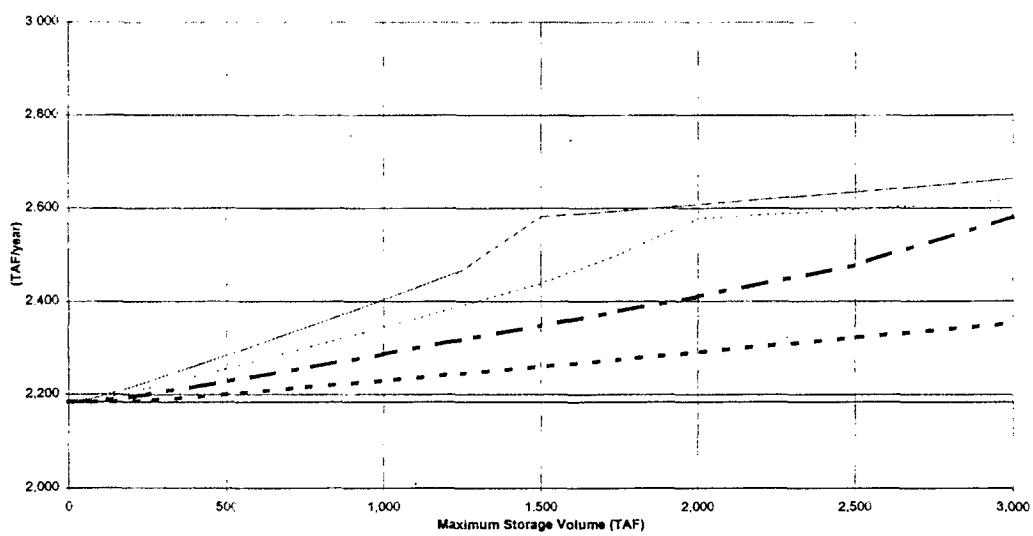
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

SC_RV6 XLS 2 Chart

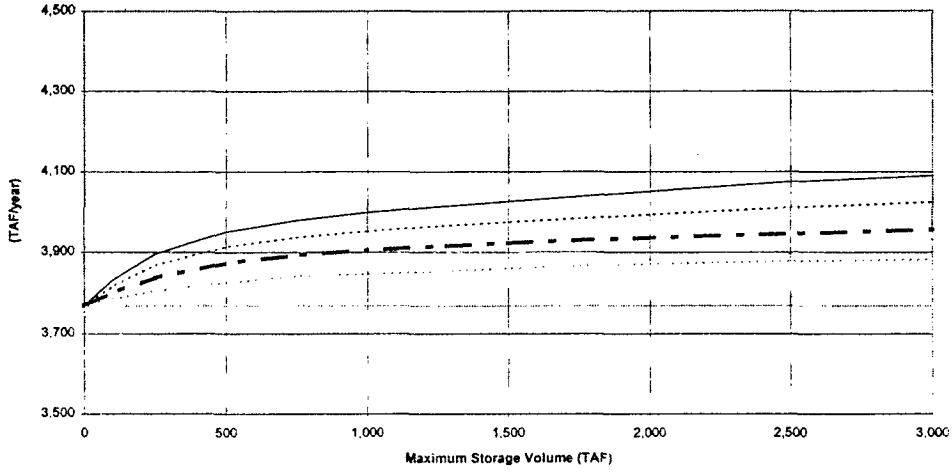
D-006698

Figure SC-3

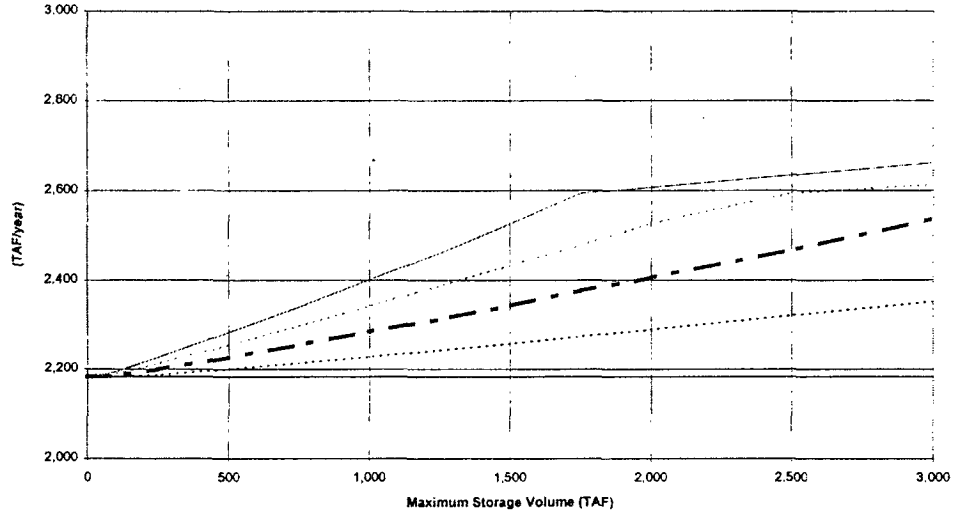
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. 71-Year Average Annual
Environmental Delta Outflow



Plot B. Minimum Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor.
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

SC_RV7 XLS 2 Charts

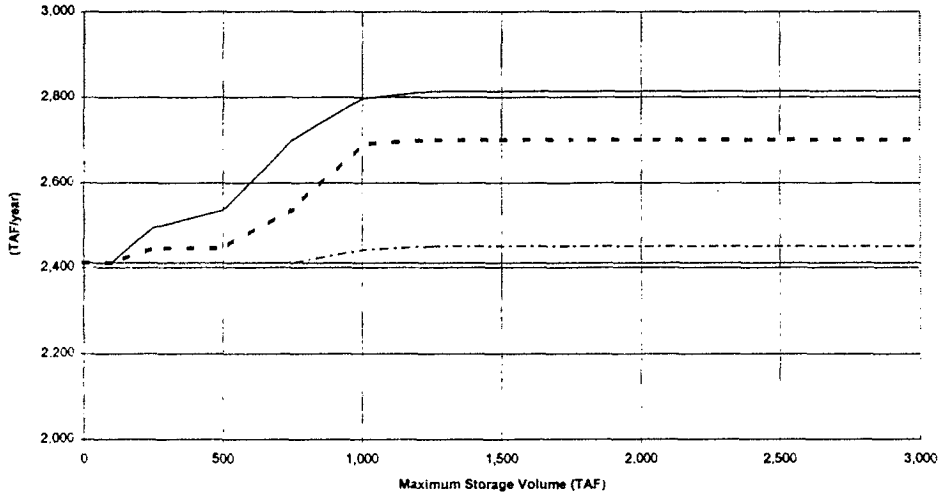
D-006699

Figure SC-4

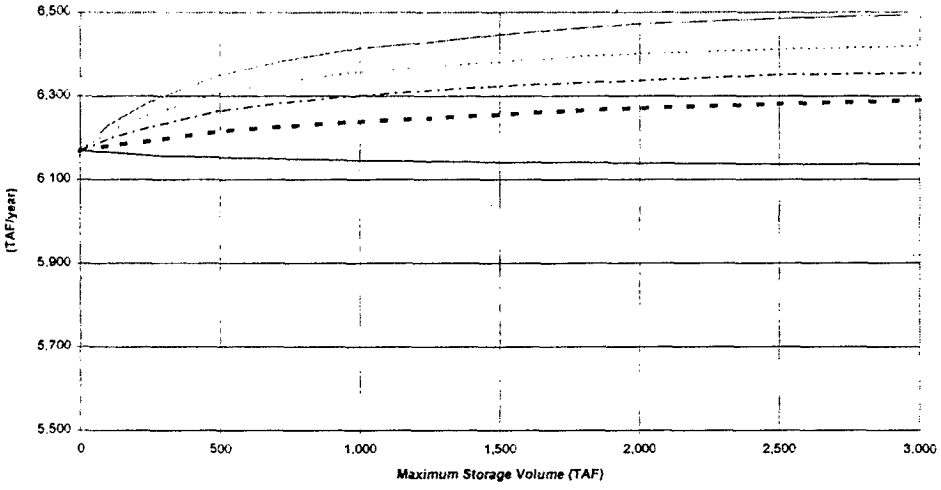
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

Plot A. Minimum Annual
Environmental Delta Outflow



Plot B. 71-Year Average Annual
Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

SC_RV8.XLS 2 Charts

Water Supply Benefits Versus Maximum Storage Volume and Facilities Allocation Factor

Model Runs

Maximum storage volumes ranging from 100 taf to 3.0 maf and facilities allocation factors ranging from 0 to 100 percent were varied in a set of model runs that simulated the eight bracketing operation conditions described previously. The model input parameter sets associated with each of the operation conditions were developed in previous sensitivity analyses for separate environmental water supply operations and agricultural and urban water supply operations for south of Delta off-stream storage facilities. The parameter sets for each of the eight bracketing operation conditions are described in Table SC-3. The model runs completed for each operation condition, maximum storage capacity, and facilities allocation factor are described in Table SC-4. Summary results in terms of total water supplies are displayed in Tables SC-5 through SC-12. Summary results describing net increases to water supplies are displayed in Tables SC-13 through SC-20. For comparability, environmental water supply results are measured using the Environmental Delta Outflow criteria (average of January through June monthly Delta outflows up to 12,000 cfs) described previously. Agricultural and urban water supply benefits are measured in terms of deliveries to combined south of Delta SWP and CVP contractors.

Evaluation

Tables SC-5 through SC-12 display the five statistical measures of total Environmental Delta Outflow and agricultural and urban water supplies achieved over the range of maximum storage volumes and facilities allocation factors studied for each of the eight bracketing operation conditions. Tables SC-13 through SC-20 display net increases in Environmental Delta Outflow and agricultural and urban water supplies for the same range of maximum storage volumes, facilities allocation factors, and operation conditions.

Figures SC-5 through SC-12 represent water supply benefits under each of the eight operation conditions. Each figure includes six plots (Plots A through F) which display 71-year annual average, critical year annual average, and minimum annual statistical measures of both Environmental Delta Outflow and agricultural and urban water supply benefits versus maximum storage volumes. Each plot contains lines representing benefits under facilities allocation factors of 0, 25, 50, 75, and 100 percent. Evaluations for the eight operation conditions are described below.

Operation Condition 1
Existing Banks Pumping Plant Conditions
Environmental Water Supply Goal: Normal Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Water Supply Operations

Tables SC-5 and SC-13 and Figure SC-5 display results for the existing Banks Pumping Plant condition with Normal Period Supply Operations for both environmental and urban and agricultural water supply. As shown in Figure SC-5 Plots A and B, 71-Year Average Annual Benefits vary inversely between environmental and agricultural and urban purposes as the

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facilities allocation facilities allocation factor is adjusted between 0 and 100 percent. As evidenced by the fairly uniform spacing between the lines representing different facilities allocation factors in both plots, benefits are shifted in an approximately linear relationship with the facilities allocation factor. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 136 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -88 and 57 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 156 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -97 and 66 taf with facilities allocation factors varying from 0 to 100 percent.

As illustrated in Figure SC-5 Plot B, a net loss in 71-Year Average Annual Agricultural and Urban Water Supply Benefits occur with facilities allocation factors of 0 to 50 percent. This occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As environmental water supply operations increase in magnitude and increasing amounts of surplus Delta water are shifted into environmental storage, opportunities for delivery of SWP Interruptible Supply are diminished. Note that in this evaluation, delivery of SWP Interruptible Supply is given last priority in relation to delivery and storage of environmental water, CVP contractual water, and SWP Table A entitlement water.

As expected under these Normal Period Supply Operations, no appreciable effects are seen in Critical Year Average Annual or Minimum Annual Water Supply Benefits. As illustrated in Figure SC-5 Plots C through F, neither the facilities allocation factor or maximum storage capacity significantly affect either environmental or agricultural and urban water supply benefits. At 3.0 maf maximum storage capacity, net increase in Critical Year Average Annual Environmental Delta Outflow ranges between 0 and 37 taf while net increase in Critical Year Average Annual Agricultural and Urban Water Supply Benefits remain fixed at -37 taf with facilities allocation factors varied from 0 to 100 percent. Minimum Annual Environmental Delta Outflow and Agricultural and Urban Water Supply Benefits are unaffected throughout the ranges of maximum storage capacity and facilities allocation factors examined.

Operation Condition 2
Existing Banks Pumping Plant Conditions
Environmental Water Supply Goal: Dry Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Water Supply Operations

Tables SC-6 and SC-14 and Figure SC-6 display results for the existing Banks Pumping Plant condition with Dry Period Supply Operations for both environmental and urban and agricultural water supply. As shown in Figure SC-6 Plots E and F, Minimum Annual Benefits vary inversely between environmental and agricultural and urban purposes as the facilities allocation factor is

adjusted between 0 and 100 percent. Maximum environmental benefits, as measured by Minimum Annual Environmental Delta Outflow, are attained with a maximum storage capacity of 500 taf for all facilities allocation factors. Maximum agricultural and urban water supply benefits are obtained with varying maximum storage capacities, depending on the magnitude of the facilities allocation factor. With maximum storage volumes ranging between 500 taf and 3.0 maf, Minimum Annual Environmental Delta Outflow ranges between 104 and 0 taf with facilities allocation factors varied between 0 and 100 percent. A near-maximum Minimum Annual Agricultural and Urban Water Supply Benefit of 248 taf is attained with a maximum storage capacity of 1,500 taf and facilities allocation factor of 100 percent.

As illustrated in Figure SC-6 Plot F, with facilities allocation factors ranging from 25 to 75 percent, net increases in Minimum Annual Agricultural and Urban Water Supply Benefits ranging from about 120 to 135 taf are attained with maximum storage capacities varying from 1.0 to 2.5 maf. With facilities allocation factors of 25, 50, and 75 percent, net increases in Minimum Annual Agricultural and Urban Water Supply Benefits begin to diminish with increasing maximum storage capacities beyond 2.5, 1.5, and 1.25 maf, respectively. This reduction occurs in cases when environmental storage is constrained by available storage capacity, but agricultural and urban storage is not constrained by available storage capacity. In these instances, increasing the available storage space for environmental water reduces the Delta surplus and inflow/outflow conveyance capacity available for storage of agricultural and urban water, resulting in reduced amounts of agricultural and urban water in storage during extended dry periods. Under this operation condition, increasing maximum storage beyond certain levels does not increase environmental benefits as measured by Minimum Annual Environmental Delta Outflow, but decreases agricultural and urban benefits as measured by Minimum Annual Agricultural and Urban Water Supply. In these cases, both environmental storage capacity and agricultural and urban storage capacity are underutilized.

As expected under these Dry Period Supply Operations, no appreciable effects are seen in 71-Year Average Annual Environmental Delta Outflow. However, more substantial effects are seen in 71-Year Average Annual Agricultural and Urban Water Supply Benefits. As illustrated in Figure SC-6 Plot A, with 3.0 maf maximum storage capacity, net increases to 71-Year Average Annual Environmental Delta Outflow range from 49 to 0 taf as the facilities allocation factor is varied between 0 and 100 percent. As shown in Figure SC-6 Plot B, with 3.0 maf maximum storage capacity, net increases to 71-Year Average Annual Agricultural and Urban Water Supply range from -83 to 63 taf as the facilities allocation factor is varied between 0 and 100 percent -- a much larger range of variance. As described earlier, much of this effect is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

Operation Condition 3
Existing Banks Pumping Plant Conditions
Environmental Water Supply Goal: Normal Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Water Supply Operations

Tables SC-7 and SC-15 and Figure SC-7 display results for the existing Banks Pumping Plant condition with Normal Period Supply Operations for environmental water supply and Dry Period Supply Operations for agricultural and urban water supply. As shown in Figure SC-7 Plots A and B, 71-Year Average Annual Benefits vary inversely between environmental and agricultural and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. As evidenced by the fairly uniform spacing between the lines representing different facilities allocation factors in both plots, 71-Year Average Annual Benefits are shifted in an approximately linear relationship with the facilities allocation factor. The majority of combined 71-Year Average Annual Benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 153 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -108 and 31 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 182 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -127 and 47 taf with facilities allocation factors varying from 0 to 100 percent. As expected, these ranges are shifted towards environmental water supply in comparison to Operation Condition 1, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. As described earlier, much of the effect on 71-Year Average Annual Agricultural and Urban Water Supply is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

As illustrated in Figure SC-7 Plot E, no effects are seen in Minimum Annual Environmental Delta Outflow over the range of maximum storage capacities and facilities allocation factors examined. As shown in Figure SC-7 Plot F, a near maximum increase in net benefits to Minimum Annual Agricultural and Urban Water Supply Benefits of 245 taf is attained with 1.5 maf maximum storage capacity and a 100 percent facilities allocation factor. With facilities allocation factors of 75 and 50 percent, near maximum increases in net benefits to Minimum Annual Agricultural and Urban Water Supply Benefits of 94 and 49 taf are attained with 750 taf maximum storage capacity. Insignificant effects in Minimum Annual Agricultural and Urban Water Supply are seen with facilities allocation factors of 25 and 0 percent. As illustrated in Figure SC-7 Plots C and D, only minor effects are seen in Critical Year Average Annual Water Supply Benefits throughout the range of maximum storage capacities and facilities allocation factors examined.

Operation Condition 4
Existing Banks Pumping Plant Conditions
Environmental Water Supply Goal: Dry Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Water Supply Operations

Tables SC-8 and SC-16 and Figure SC-8 display results for the existing Banks Pumping Plant condition with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agricultural and urban water supply. As shown in Figure SC-8 Plots A and B, the majority of combined 71-Year Average Annual Benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 45 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -40 and 72 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 47 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -62 and 82 taf with facilities allocation factors varying from 0 to 100 percent. As expected, these ranges are shifted towards agricultural and urban water supply in comparison to Operation Condition 1, which included Normal Period Supply operations for both environmental water supply and agricultural and urban water supply. As described earlier, much of the effect on 71-Year Average Annual Agricultural and Urban Water Supply Benefits is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

As illustrated in Figure SC-8 Plot F, no effects are seen in Minimum Annual Agricultural and Urban Water Supply Benefits over the range of maximum storage capacities and facilities allocation factors examined. As shown in Figure SC-8 Plot E, a maximum increase in net benefit to Minimum Annual Environmental Delta Outflow of 50 taf is attained with 500 taf maximum storage capacity and 100 percent facilities allocation factor. With a facilities allocation factor of 25 percent, maximum increases in net benefits to Minimum Annual Environmental Delta Outflow of 26 taf are attained with 500 taf maximum storage capacity. Insignificant effects in Minimum Annual Environmental Delta Outflow are seen with facilities allocation factors of 50 through 100 percent. As illustrated in Figure SC-8 Plot D, no effects are seen in Critical Year Average Annual Agricultural and Urban Water Supply Benefits over the range of maximum storage capacities and facilities allocation factors examined. As shown in Figure SC-8 Plot C, net increases to Critical Year Average Annual Environmental Delta Outflow range from 109 to 0 taf for a maximum storage capacity of 3.0 maf as the facilities allocation factor is varied from 0 to 100 percent. A large share of the maximum benefits, a 70 taf increase in Critical Year Average Annual Environmental Delta Outflow, is attained with a maximum storage capacity of 1.5 maf and a facilities allocation factor of 50 percent.

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Operation Condition 5
Expanded Banks Pumping Plant Conditions
Environmental Water Supply Goal: Normal Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Water Supply Operations

Tables SC-9 and SC-17 and Figure SC-9 display results for the expanded Banks Pumping Plant condition with Normal Period Supply Operations for both environmental and urban and agricultural water supply. As shown in Figure SC-9 Plots A and B, 71-Year Average Annual Benefits vary inversely between environmental and agricultural and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. As evidenced by the fairly uniform spacing between the lines representing different facilities allocation factors in both plots, benefits are shifted in an approximately linear relationship with the facilities allocation factor. The majority of combined benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. This pattern of benefits is similar to the pattern seen under Operation Condition 1 which included the assumption of existing Banks Pumping Plant capacity, but with amplified variance in benefits as maximum storage capacity and facilities allocation factor are varied.

At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 218 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -64 and 218 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-year Average Annual Environmental Delta Outflow ranges between 307 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -83 and 292 taf with facilities allocation factors varying from 0 to 100 percent.

As illustrated in Figure SC-9 Plot B, a net loss in 71-Year Average Annual Agricultural and Urban Water Supply Benefits occur with the facilities allocation factor set at 0 percent. As described earlier, this occurs primarily due to a decrease in SWP Interruptible Supply deliveries. As environmental water supply operations increase in magnitude and increasing amounts of surplus Delta water are shifted into environmental storage, opportunities for delivery of SWP Interruptible Supply are diminished. Positive (although minimal) net benefits are seen in 71-Year Average Annual Agricultural and Urban Water Supply Benefits with the facilities allocation factor set at 25 percent. Under Operation Condition 1 (existing Banks Pumping Plant capacity), positive net benefits in 71-Year Average Annual Agricultural and Urban Water Supply are not produced until the facilities allocation factor is increased to 75 percent.

As expected under these Normal Period Supply Operations, no affects are seen in Minimum Annual Water Supply Benefits. As illustrated in Figure SC-9 Plots E and F, neither the facilities allocation factor or maximum storage capacity affect either environmental or agricultural and urban water supply benefits. More significant incidental effects are seen in Critical Year Average Annual Water Supply benefits. At 3.0 maf maximum storage capacity, net increase in Critical Year Average Annual Environmental Delta Outflow ranges from 332 to 0 taf while net

increase in Critical Year Average Annual Agricultural and Urban Water Supply Benefits range from -13 to 116 taf with facilities allocation factors varied from 0 to 100 percent. Significant effects are seen in Critical Year Average Annual Environmental Delta Outflow for facilities allocation factors up to 50 percent, while effects on Critical Year Average Annual Agricultural and Urban Water Supply Benefits are relatively insignificant for facilities allocation factors below 100 percent.

Operation Condition 6
Expanded Banks Pumping Plant Conditions
Environmental Water Supply Goal: Dry Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Water Supply Operations

Tables SC-10 and SC-18 and Figure SC-10 display results for the expanded Banks Pumping Plant condition with Dry Period Supply Operations for both environmental and urban and agricultural water supply. As shown in Figure SC-10 Plots E and F, Minimum Annual Benefits vary inversely between environmental and agricultural and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. Maximum environmental benefits, as measured by Minimum Annual Environmental Delta Outflow, are attained with maximum storage capacities of 1.0 to 1.25 maf for facilities allocation factors of 0 to 50 percent. Minimum Annual Environmental Delta Outflow is unaffected with facilities allocation factors of 75 and 100 percent. Maximum agricultural and urban water supply, as measured by Minimum Annual Agricultural and Urban Water Supply Benefits, increases throughout the range of maximum storage capacities examined. Incremental increases in benefits decrease significantly beyond maximum storage capacities of 1.5 and 2.0 maf for facilities allocation factors of 75 and 100 percent, respectively. Minimum Annual Agricultural and Urban Water Supply Benefits increase fairly linearly throughout the range of maximum storage capacities for facilities allocation factors of 25 and 50 percent. Minimum Annual Agricultural and Urban Water Supply Benefits are unaffected with a facilities allocation factor of 0 percent. This pattern of benefits is similar to the pattern seen under Operation Condition 2, which included the assumption of existing Banks Pumping Plant capacity, but with amplified variance in benefits as maximum storage capacity and facilities allocation factor are varied.

As illustrated in Figure SC-10 Plot E, a maximum net increase to Minimum Annual Environmental Delta Outflow of 410 taf is attained with a maximum storage capacity of 1.0 maf and a facilities allocation factor of 0 percent. Benefits are reduced in rough proportion to allotted storage capacity when the facilities allocation factor is increased to 25 percent; a maximum storage capacity of 1.25 maf results in a net increase to Minimum Annual Environmental Delta Outflow of 308 taf. When the facilities allocation factor is increased to 50 percent, net increase to Minimum Annual Environmental Delta Outflow is significantly reduced. Under this condition, a maximum net increase to Minimum Annual Environmental Delta Outflow of 77 taf is attained with a maximum storage capacity of 1.25 maf.

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As shown in Figure SC-10 Plot F, significant net increases in Minimum Annual Agricultural and Urban Water Supply Benefits of 397 to 479 taf are attained with a maximum storage capacity of 3.0 maf and facilities allocation factors ranging from 50 to 100 percent. Significant reduction in benefits occur as the facilities allocation factor is reduced to 25 percent; net increases in Minimum Annual Agricultural and Urban Water Supply Benefits are reduced to 169 taf with a maximum storage capacity of 3.0 maf. With a maximum storage capacity of 2.0 maf, net increases in Minimum Annual Agricultural and Urban Water Supply Benefits are roughly proportional to allotted storage capacity, with net increases in Minimum Annual Agricultural and Urban Water Supply Benefits of 107, 226, 394, and 423 taf attained with facilities allocation factors of 25, 50, 75, and 100 percent.

As shown in Figure SC-10 Plots C and D, Critical Year Average Annual Water Supply Benefits are relatively proportional to allotted storage capacity. Net increases in Critical Year Average Annual Environmental Delta Outflow reach maximums of 259 and 236 taf with maximum storage capacities of 1,500 and 2,000 taf for facilities allocation factors of 0 and 25 percent. Net increases to Critical Year Average Annual Environmental Delta Outflow continue to increase throughout the range of storage capacities examined for facilities allocation factors of 50 and 75 percent. No affect on Critical Year Average Annual Environmental Delta Outflow is seen with a facilities allocation factor of 100 percent. Net increases in Critical Year Average Annual Agricultural and Urban Water Supply Benefits vary in a roughly linear relationship with allotted storage capacity throughout the range of storage capacities and facilities allocation factors examined. Net increases in Critical Year Average Annual Agricultural and Urban Water Supply of 11 to 363 taf are attained with a maximum storage capacity of 3.0 maf as the facilities allocation factor is varied from 0 to 100 percent.

As expected under these Dry Period Supply Operations, only minor effects are seen in 71-Year Average Annual Environmental Delta Outflow. However, more substantial effects are seen in 71-Year Average Annual Agricultural and Urban Water Supply Benefits. As illustrated in Figure SC-10 Plot A, with 3.0 maf maximum storage capacity, net increases to 71-Year Average Annual Environmental Delta Outflow range from 93 to 0 taf as the facilities allocation factor is varied between 0 and 100 percent. As shown in Figure SC-10 Plot B, with 3.0 maf maximum storage capacity, net increases to 71-Year Average Annual Agricultural and Urban Water Supply range from -85 to 202 taf as the facilities allocation factor is varied between 0 and 100 percent -- a much larger range of variance. As described earlier, much of this effect is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

Operation Condition 7
Expanded Banks Pumping Plant Conditions
Environmental Water Supply Goal: Normal Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Dry Period Water Supply Operations

Tables SC-11 and SC-19 and Figure SC-11 display results for the expanded Banks Pumping Plant condition with Normal Period Supply Operations for environmental water supply and Dry

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Period Supply Operations for agricultural and urban water supply. As shown in Figure SC-10 Plots A and B, 71-Year Average Annual Benefits vary inversely between environmental and agricultural and urban purposes as the facilities allocation factor is adjusted between 0 and 100 percent. As evidenced by the fairly uniform spacing between the lines representing different facilities allocation factors in both plots, 71-Year Average Annual Benefits are shifted in an approximately linear relationship with the facilities allocation factor. This pattern of benefits is similar to the pattern seen under Operation Condition 3 which included the assumption of existing Banks Pumping Plant capacity, but with amplified variance in benefits as maximum storage capacity and facilities allocation factor are varied. The majority of combined 71-Year Average Annual Benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 231 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -113 and 96 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 322 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -132 and 179 taf with facilities allocation factors varying from 0 to 100 percent. As expected, these ranges are shifted towards environmental water supply in comparison to Operation Condition 5, which included Normal Period Supply operations for agricultural and urban water supply. As described earlier, much of the effect on 71-Year Average Annual Agricultural and Urban Water Supply is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

As illustrated in Figure SC-11 Plot E, no effects are seen in Minimum Annual Environmental Delta Outflow over the range of maximum storage capacities and facilities allocation factors examined. As shown in Figure SC-11 Plot F, a near maximum net increase in minimum Annual Agricultural and Urban Water Supply Benefits of 410 taf is attained with 1.75 maf maximum storage capacity and 100 percent facilities allocation factor. With a facilities allocation factor of 75 percent, a near maximum net increase in Minimum Annual Agricultural and Urban Water Supply Benefits of 410 taf is also attained with 2.5 maf maximum storage capacity. Increases to net Minimum Annual Agricultural and Urban Water Supply Benefits are fairly linear with increasing maximum storage capacity for facilities allocation factors of 50 and 25 percent, with maximum net increases of 354 and 168 taf attained with a maximum storage capacity of 3,000 taf. No effects in Minimum Annual Agricultural and Urban Water Supply are seen with a facilities allocation factor of 0 percent.

As illustrated in Figure SC-11 Plots C and D, both Critical Year Average Annual Environmental Delta Outflow and Critical Year Average Annual Agricultural and Urban Water Supply Benefits increase in a linear relationship with both facilities allocation factor and maximum storage capacity. With a 3.0 maf maximum storage capacity, net increases in Critical Year Average Annual Environmental Delta Outflow range from 365 to 0 taf and net increases in Critical Year Average Annual Agricultural and Urban Water Supply Benefits range from -24 to 332 taf as the facilities allocation factor is varied from 0 to 100 percent. With a maximum storage capacity of

3.0 maf and a facilities allocation factor of 50 percent, benefits are fairly balanced, with a net increase of 153 taf in Critical Year Average Annual Environmental Delta Outflow and a net increase of 123 taf in Critical Year Average Annual Agricultural and Urban Water Supply.

Operation Condition 8
Expanded Banks Pumping Plant Conditions
Environmental Water Supply Goal: Dry Period Water Supply Operations
Agricultural and Urban Water Supply Goal: Normal Period Water Supply Operations

Tables SC-12 and SC-20 and Figure SC-12 display results for the expanded Banks Pumping Plant condition with Dry Period Supply Operations for environmental water supply and Normal Period Supply Operations for agricultural and urban water supply. As shown in Figure SC-12 Plots A and B, the majority of combined 71-Year Average Annual Benefits under all facilities allocation factors are attained with a maximum storage capacity of 1.0 maf, with diminishing incremental benefits for maximum storage capacities between 1.0 and 3.0 maf. At 1.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 85 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -23 and 247 taf with facilities allocation factors varied between 0 and 100 percent. At 3.0 maf maximum storage capacity, net increase in 71-Year Average Annual Environmental Delta Outflow ranges between 92 and 0 taf and net increase in 71-Year Average Annual Agricultural and Urban Water Supply Benefits range between -33 and 326 taf with facilities allocation factors varying from 0 to 100 percent. As expected, these ranges are significantly shifted towards agricultural and urban water supply in comparison to Operation Condition 5, which included Normal Period Supply operations for environmental water supply. As described earlier, much of the effect on 71-Year Average Annual Agricultural and Urban Water Supply is due to impacts to SWP Interruptible Supply Deliveries, the last priority water supply delivery in this evaluation.

As illustrated in Figure SC-12 Plot F, minimal effects are seen in Minimum Annual Agricultural and Urban Water Supply Benefits with facilities allocation factors between 0 and 75 percent. Significant benefits of 236 to 363 taf are attained with a facilities allocation factor of 100 percent and maximum storage capacities of 2.5 and 3.0 maf. As shown in Figure SC-12 Plot E, a maximum increase in net benefit to Minimum Annual Environmental Delta Outflow of 404 taf is attained with 1.25 maf maximum storage capacity and a 100 percent facilities allocation factor. With a facilities allocation factor of 25 percent, maximum increases in net benefits to Minimum Annual Environmental Delta Outflow of 289 taf are attained with 1.25 maf maximum storage capacity. Insignificant effects in Minimum Annual Environmental Delta Outflow are seen with facilities allocation factors of 50 through 100 percent. As illustrated in Figure SC-12 Plot D, moderate effects are seen in Critical Year Average Annual Agricultural and Urban Water Supply Benefits with facilities allocation factors of 50 percent and higher at the upper end of the maximum storage capacity range. A maximum net increase in Critical Year Average Annual Agricultural and Urban Water Supply Benefits of 192 taf is attained with a maximum storage capacity of 3.0 maf and a facilities allocation factor of 100 percent. As shown in Figure SC-12

Plot C, net increases to Critical Year Average Annual Environmental Delta Outflow range from 251 to 0 taf for a maximum storage capacity of 3.0 maf as the facilities allocation factor is varied from 0 to 100 percent. A large share of the maximum benefits, a 167 taf increase in Critical Year Average Annual Environmental Delta Outflow, is attained with a maximum storage capacity of 1.0 maf and a facilities allocation factor of 25 percent.

Table SC-3

South of Delta Off-Aqueduct Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Parameter Sets
1. Existing Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Existing Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
2. Existing Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Existing Banks Pumping Plant Capacity Env. Storage Carryover Factor = 50% Unmet Demand Delivery Factor = 30% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP
3. Existing Banks Pu nping Plant Capacity Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Existing Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP
4. Existing Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Existing Banks Pumping Plant Capacity Env. Storage Carryover Factor = 50% Unmet Demand Delivery Factor = 30% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

D — 0 0 6 7 1 2

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Table SC-3 (Continued)

South of Delta Off-Aqueduct Storage
Selected Parameter Sets for Bracketing Operational Conditons

Operational Condition	Parameter Sets
5. Expanded Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Expanded Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP
6. Expanded Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Expanded Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 50% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP
7. Expanded Banks Pumping Plant Capacity Environmental Storage: Normal Period Supply Operation Ag & Urban Storage: Dry Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Expanded Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 100% Jan-Jun Outflow Demand Target = 15,000 cfs Ag & Urban Storage Carryover Factor = 50% Unmet Demand Target = SWP
8. Expanded Banks Pumping Plant Capacity Environmental Storage: Dry Period Supply Operation Ag & Urban Storage: Normal Period Supply Operation	3,500 cfs Inflow/Outflow Capacity Expanded Banks Pumping Plant Capacity Env. Storage Carryover Factor = 0% Unmet Demand Delivery Factor = 50% Jan-Jun Outflow Demand Target = 9,000 cfs Ag & Urban Storage Carryover Factor = 0% Unmet Demand Target = SWP & CVP

D — 0 0 6 7 1 3

D-006713

Table SC-4

South of Delta Off-Aqueduct Storage
Model Runs for Evaluation of Maximum Reservoir Volume and Facilities Allocation Factor

Operational Condition	Run Results Workbook	Execution Workbook	Maximum Reservoir Volume (taf)	Model Run Identifiers: Facilities Allocation Factor 0%	Facilities Allocation Factor 25%	Facilities Allocation Factor 50%	Facilities Allocation Factor 75%	Facilities Allocation Factor 100%
1 Existing Banks Pumping Plant Capacity Environmental Storage Normal Period Supply Operation Ag & Urban Storage Normal Period Supply Operation	OUT_SC1.XLS	SC_RV1.XLS	100	SC001	SC012	SC023	SC034	SC045
			250	SC002	SC013	SC024	SC035	SC046
			500	SC003	SC014	SC025	SC036	SC047
			750	SC004	SC015	SC026	SC037	SC048
			1,000	SC005	SC016	SC027	SC038	SC049
			1,250	SC006	SC017	SC028	SC039	SC050
			1,500	SC007	SC018	SC029	SC040	SC051
			1,750	SC008	SC019	SC030	SC041	SC052
			2,000	SC009	SC020	SC031	SC042	SC053
			2,500	SC010	SC021	SC032	SC043	SC054
			3,000	SC011	SC022	SC033	SC044	SC055
2 Existing Banks Pumping Plant Capacity Environmental Storage Dry Period Supply Operation Ag & Urban Storage Dry Period Supply Operation	OUT_SC2.XLS	SC_RV2.XLS	100	SC101	SC112	SC123	SC134	SC145
			250	SC102	SC113	SC124	SC135	SC146
			500	SC103	SC114	SC125	SC136	SC147
			750	SC104	SC115	SC126	SC137	SC148
			1,000	SC105	SC116	SC127	SC138	SC149
			1,250	SC106	SC117	SC128	SC139	SC150
			1,500	SC107	SC118	SC129	SC140	SC151
			1,750	SC108	SC119	SC130	SC141	SC152
			2,000	SC109	SC120	SC131	SC142	SC153
			2,500	SC110	SC121	SC132	SC143	SC154
			3,000	SC111	SC122	SC133	SC144	SC155
3 Existing Banks Pumping Plant Capacity Environmental Storage Normal Period Supply Operation Ag & Urban Storage Dry Period Supply Operation	OUT_SC3.XLS	SC_RV3.XLS	100	SC201	SC212	SC223	SC234	SC245
			250	SC202	SC213	SC224	SC235	SC246
			500	SC203	SC214	SC225	SC236	SC247
			750	SC204	SC215	SC226	SC237	SC248
			1,000	SC205	SC216	SC227	SC238	SC249
			1,250	SC206	SC217	SC228	SC239	SC250
			1,500	SC207	SC218	SC229	SC240	SC251
			1,750	SC208	SC219	SC230	SC241	SC252
			2,000	SC209	SC220	SC231	SC242	SC253
			2,500	SC210	SC221	SC232	SC243	SC254
			3,000	SC211	SC222	SC233	SC244	SC255
4 Existing Banks Pumping Plant Capacity Environmental Storage Dry Period Supply Operation Ag & Urban Storage Normal Period Supply Operation	OUT_SC4.XLS	SC_RV4.XLS	100	SC301	SC312	SC323	SC334	SC345
			250	SC302	SC313	SC324	SC335	SC346
			500	SC303	SC314	SC325	SC336	SC347
			750	SC304	SC315	SC326	SC337	SC348
			1,000	SC305	SC316	SC327	SC338	SC349
			1,250	SC306	SC317	SC328	SC339	SC350
			1,500	SC307	SC318	SC329	SC340	SC351
			1,750	SC308	SC319	SC330	SC341	SC352
			2,000	SC309	SC320	SC331	SC342	SC353
			2,500	SC310	SC321	SC332	SC343	SC354
			3,000	SC311	SC322	SC333	SC344	SC355
5 Expanded Banks Pumping Plant Capacity Environmental Storage Normal Period Supply Operation Ag & Urban Storage Normal Period Supply Operation	OUT_SC5.XLS	SC_RV5.XLS	100	SC401	SC412	SC423	SC434	SC445
			250	SC402	SC413	SC424	SC435	SC446
			500	SC403	SC414	SC425	SC436	SC447
			750	SC404	SC415	SC426	SC437	SC448
			1,000	SC405	SC416	SC427	SC438	SC449
			1,250	SC406	SC417	SC428	SC439	SC450
			1,500	SC407	SC418	SC429	SC440	SC451
			1,750	SC408	SC419	SC430	SC441	SC452
			2,000	SC409	SC420	SC431	SC442	SC453
			2,500	SC410	SC421	SC432	SC443	SC454
			3,000	SC411	SC422	SC433	SC444	SC455
6 Expanded Banks Pumping Plant Capacity Environmental Storage Dry Period Supply Operation Ag & Urban Storage Dry Period Supply Operation	OUT_SC6.XLS	SC_RV6.XLS	100	SC501	SC512	SC523	SC534	SC545
			250	SC502	SC513	SC524	SC535	SC546
			500	SC503	SC514	SC525	SC536	SC547
			750	SC504	SC515	SC526	SC537	SC548
			1,000	SC505	SC516	SC527	SC538	SC549
			1,250	SC506	SC517	SC528	SC539	SC550
			1,500	SC507	SC518	SC529	SC540	SC551
			1,750	SC508	SC519	SC530	SC541	SC552
			2,000	SC509	SC520	SC531	SC542	SC553
			2,500	SC510	SC521	SC532	SC543	SC554
			3,000	SC511	SC522	SC533	SC544	SC555
7 Expanded Banks Pumping Plant Capacity Environmental Storage Normal Period Supply Operation Ag & Urban Storage Dry Period Supply Operation	OUT_SC7.XLS	SC_RV7.XLS	100	SC601	SC612	SC623	SC634	SC645
			250	SC602	SC613	SC624	SC635	SC646
			500	SC603	SC614	SC625	SC636	SC647
			750	SC604	SC615	SC626	SC637	SC648
			1,000	SC605	SC616	SC627	SC638	SC649
			1,250	SC606	SC617	SC628	SC639	SC650
			1,500	SC607	SC618	SC629	SC640	SC651
			1,750	SC608	SC619	SC630	SC641	SC652
			2,000	SC609	SC620	SC631	SC642	SC653
			2,500	SC610	SC621	SC632	SC643	SC654
			3,000	SC611	SC622	SC633	SC644	SC655
8 Expanded Banks Pumping Plant Capacity Environmental Storage Dry Period Supply Operation Ag & Urban Storage Normal Period Supply Operation	OUT_SC8.XLS	SC_RV8.XLS	100	SC701	SC712	SC723	SC734	SC745
			250	SC702	SC713	SC724	SC735	SC746
			500	SC703	SC714	SC725	SC736	SC747
			750	SC704	SC715	SC726	SC737	SC748
			1,000	SC705	SC716	SC727	SC738	SC749
			1,250	SC706	SC717	SC728	SC739	SC750
			1,500	SC707	SC718	SC729	SC740	SC751
			1,750	SC708	SC719	SC730	SC741	SC752
			2,000	SC709	SC720	SC731	SC742	SC753
			2,500	SC710	SC721	SC732	SC743	SC754
			3,000	SC711	SC722	SC733	SC744	SC755

SC_RVSM.XLS Runs

Table SC-5

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	SC001	SC002	SC003	SC004	SC005	SC006	SC007	SC008	SC009	SC010	SC011	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,807	3,848	3,887	3,901	3,910	3,915	3,918	3,921	3,924	3,930	3,930	3,930	156	4.1%
1928-34 Dry Period Average	3,249	3,262	3,286	3,270	3,270	3,270	3,270	3,270	3,270	3,270	3,270	3,270	3,270	22	0.7%
Dry Year Average	3,484	3,514	3,554	3,615	3,662	3,677	3,692	3,706	3,706	3,713	3,736	3,736	3,736	253	7.2%
Critically Dry Year Average	2,942	2,950	2,963	2,974	2,974	2,974	2,974	2,974	2,974	2,974	2,979	2,979	2,979	37	1.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,895	5,872	5,846	5,837	5,833	5,830	5,828	5,826	5,825	5,824	5,824	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,879	3,879	3,879	3,879	3,879	3,879	3,879	3,879	3,879	3,879	3,879	3,918	0	0.0%
Dry Year Average	5,374	5,352	5,336	5,329	5,319	5,318	5,318	5,318	5,318	5,318	5,318	5,318	5,374	0	0.0%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	SC012	SC013	SC014	SC015	SC016	SC017	SC018	SC019	SC020	SC021	SC022	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,799	3,830	3,861	3,874	3,880	3,883	3,885	3,888	3,890	3,893	3,893	3,893	119	3.2%
1928-34 Dry Period Average	3,249	3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259	3,259	10	0.3%
Dry Year Average	3,484	3,506	3,534	3,575	3,606	3,620	3,631	3,643	3,654	3,658	3,658	3,658	3,658	174	5.0%
Critically Dry Year Average	2,942	2,948	2,958	2,962	2,962	2,962	2,962	2,962	2,962	2,962	2,962	2,962	2,962	20	0.7%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,905	5,890	5,879	5,873	5,870	5,867	5,867	5,867	5,868	5,866	5,866	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,882	3,882	3,882	3,882	3,882	3,882	3,882	3,882	3,882	3,882	3,882	3,918	0	0.0%
Dry Year Average	5,374	5,358	5,349	5,343	5,338	5,338	5,338	5,338	5,338	5,341	5,338	5,338	5,374	0	0.0%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	SC023	SC024	SC025	SC026	SC027	SC028	SC029	SC030	SC031	SC032	SC033	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,791	3,811	3,833	3,842	3,845	3,847	3,849	3,850	3,852	3,854	3,854	3,854	80	2.1%
1928-34 Dry Period Average	3,249	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	3,255	7	0.2%
Dry Year Average	3,484	3,496	3,517	3,536	3,555	3,564	3,571	3,579	3,586	3,594	3,601	3,601	3,601	117	3.3%
Critically Dry Year Average	2,942	2,946	2,952	2,955	2,955	2,955	2,955	2,955	2,955	2,956	2,955	2,955	2,955	13	0.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,916	5,917	5,911	5,908	5,906	5,905	5,905	5,907	5,908	5,907	5,907	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,918	0	0.0%
Dry Year Average	5,374	5,364	5,362	5,362	5,360	5,360	5,365	5,372	5,380	5,388	5,384	5,384	5,388	14	0.3%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	SC034	SC035	SC036	SC037	SC038	SC039	SC040	SC041	SC042	SC043	SC044	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,782	3,793	3,804	3,808	3,810	3,811	3,812	3,813	3,813	3,814	3,814	3,814	40	1.1%
1928-34 Dry Period Average	3,249	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3	0.1%
Dry Year Average	3,484	3,491	3,500	3,508	3,509	3,510	3,513	3,517	3,521	3,525	3,528	3,528	3,528	44	1.3%
Critically Dry Year Average	2,942	2,944	2,947	2,948	2,948	2,948	2,948	2,948	2,948	2,948	2,948	2,948	2,948	7	0.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,926	5,938	5,941	5,942	5,942	5,942	5,943	5,945	5,948	5,947	5,947	5,948	27	0.5%
1928-34 Dry Period Average	3,918	3,889	3,889	3,889	3,889	3,889	3,889	3,889	3,889	3,889	3,889	3,889	3,918	0	0.0%
Dry Year Average	5,374	5,370	5,377	5,386	5,396	5,397	5,408	5,419	5,430	5,441	5,442	5,442	5,442	66	1.3%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	SC045	SC046	SC047	SC048	SC049	SC050	SC051	SC052	SC053	SC054	SC055	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,936	5,957	5,971	5,976	5,978	5,978	5,980	5,984	5,987	5,987	5,987	5,987	66	1.1%
1928-34 Dry Period Average	3,918	3,892	3,892	3,892	3,892	3,892	3,892	3,892	3,892	3,892	3,892	3,852	3,918	0	0.0%
Dry Year Average	5,374	5,376	5,393	5,410	5,422	5,436	5,451	5,466	5,481	5,494	5,494	5,494	5,494	120	2.2%
Critically Dry Year Average	3,421	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,384	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,205	2,206	2,206	0	0.0%

Table SC-6

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%															
Run Identifiers	Base 1	SC101	SC102	SC103	SC104	SC105	SC106	SC107	SC108	SC109	SC110	SC111	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,792	3,805	3,814	3,819	3,822	3,823	3,823	3,823	3,823	3,823	3,823	3,823	49	1.3%
1928-34 Dry Period Average	3,249	3,273	3,298	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	3,311	62	1.9%
Dry Year Average	3,484	3,513	3,535	3,553	3,561	3,563	3,563	3,563	3,563	3,563	3,563	3,563	3,563	79	2.3%
Critically Dry Year Average	2,942	2,966	2,987	3,026	3,045	3,057	3,064	3,064	3,064	3,064	3,064	3,064	3,064	122	4.2%
Minimum Annual	2,410	2,423	2,491	2,514	2,514	2,514	2,514	2,514	2,514	2,514	2,514	2,514	2,514	104	4.3%
Ag & Urban Benefits															
71-Year Average	5,921	5,893	5,882	5,871	5,863	5,858	5,855	5,851	5,848	5,844	5,842	5,838	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,921	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,921	3	0.1%
Dry Year Average	5,374	5,367	5,361	5,357	5,353	5,353	5,348	5,343	5,343	5,343	5,343	5,343	5,374	0	0.0%
Critically Dry Year Average	3,421	3,423	3,422	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,423	2	0.1%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%															
Run Identifiers	Base 1	SC112	SC113	SC114	SC115	SC116	SC117	SC118	SC119	SC120	SC121	SC122	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,788	3,800	3,808	3,814	3,817	3,819	3,820	3,821	3,821	3,821	3,821	3,821	47	1.2%
1928-34 Dry Period Average	3,249	3,268	3,287	3,296	3,296	3,296	3,296	3,296	3,296	3,296	3,296	3,296	3,296	47	1.5%
Dry Year Average	3,484	3,507	3,528	3,544	3,556	3,560	3,562	3,562	3,562	3,562	3,562	3,562	3,562	78	2.2%
Critically Dry Year Average	2,942	2,960	2,980	3,004	3,018	3,033	3,043	3,051	3,054	3,054	3,054	3,054	3,054	112	3.8%
Minimum Annual	2,410	2,413	2,459	2,476	2,476	2,476	2,476	2,476	2,476	2,476	2,476	2,476	2,476	66	2.7%
Ag & Urban Benefits															
71-Year Average	5,921	5,902	5,901	5,900	5,899	5,899	5,896	5,893	5,892	5,892	5,888	5,880	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,925	3,917	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,918	3,925	7	0.2%
Dry Year Average	5,374	5,373	5,377	5,391	5,394	5,405	5,400	5,400	5,407	5,413	5,404	5,404	5,413	40	0.7%
Critically Dry Year Average	3,421	3,425	3,425	3,427	3,431	3,436	3,440	3,445	3,450	3,454	3,462	3,461	3,462	41	1.2%
Minimum Annual	2,206	2,206	2,208	2,215	2,228	2,243	2,257	2,272	2,287	2,302	2,327	2,319	2,327	121	5.5%

Facilities Allocation Factor = 50%															
Run Identifiers	Base 1	SC123	SC124	SC125	SC126	SC127	SC128	SC129	SC130	SC131	SC132	SC133	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,784	3,793	3,801	3,806	3,810	3,813	3,815	3,817	3,818	3,819	3,819	3,819	45	1.2%
1928-34 Dry Period Average	3,249	3,261	3,275	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	33	1.0%
Dry Year Average	3,484	3,499	3,516	3,532	3,543	3,552	3,558	3,560	3,562	3,562	3,562	3,562	3,562	78	2.2%
Critically Dry Year Average	2,942	2,954	2,964	2,980	2,993	3,003	3,012	3,022	3,028	3,035	3,044	3,044	3,044	102	3.5%
Minimum Annual	2,410	2,412	2,428	2,439	2,439	2,439	2,439	2,439	2,439	2,439	2,439	2,439	2,439	29	1.2%
Ag & Urban Benefits															
71-Year Average	5,921	5,910	5,916	5,920	5,923	5,923	5,921	5,921	5,918	5,916	5,912	5,910	5,923	2	0.0%
1928-34 Dry Period Average	3,918	3,930	3,927	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	13	0.3%
Dry Year Average	5,374	5,380	5,396	5,418	5,431	5,444	5,438	5,440	5,438	5,436	5,439	5,443	5,444	70	1.3%
Critically Dry Year Average	3,421	3,427	3,431	3,441	3,449	3,458	3,467	3,471	3,473	3,474	3,475	3,463	3,475	54	1.6%
Minimum Annual	2,206	2,207	2,214	2,241	2,270	2,298	2,328	2,338	2,336	2,334	2,321	2,265	2,338	131	6.0%

Facilities Allocation Factor = 75%															
Run Identifiers	Base 1	SC134	SC135	SC136	SC137	SC138	SC139	SC140	SC141	SC142	SC143	SC144	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,778	3,785	3,792	3,796	3,798	3,800	3,802	3,804	3,805	3,807	3,808	3,808	34	0.9%
1928-34 Dry Period Average	3,249	3,255	3,263	3,266	3,266	3,266	3,266	3,266	3,266	3,266	3,266	3,266	3,266	17	0.5%
Dry Year Average	3,484	3,491	3,501	3,514	3,523	3,529	3,532	3,536	3,539	3,541	3,544	3,544	3,544	60	1.7%
Critically Dry Year Average	2,942	2,948	2,952	2,957	2,964	2,971	2,977	2,983	2,988	2,993	2,998	3,005	3,005	63	2.1%
Minimum Annual	2,410	2,411	2,413	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	4	0.2%
Ag & Urban Benefits															
71-Year Average	5,921	5,918	5,930	5,939	5,943	5,944	5,945	5,945	5,943	5,943	5,946	5,947	5,947	26	0.4%
1928-34 Dry Period Average	3,918	3,935	3,937	3,942	3,942	3,942	3,942	3,942	3,942	3,942	3,942	3,942	3,942	24	0.6%
Dry Year Average	5,374	5,368	5,414	5,449	5,464	5,471	5,473	5,472	5,473	5,475	5,487	5,494	5,494	120	2.2%
Critically Dry Year Average	3,421	3,432	3,440	3,455	3,467	3,477	3,481	3,483	3,485	3,484	3,493	3,498	3,498	77	2.3%
Minimum Annual	2,206	2,209	2,227	2,268	2,311	2,340	2,342	2,342	2,336	2,322	2,316	2,316	2,342	136	6.2%

Facilities Allocation Factor = 100%															
Run Identifiers	Base 1	SC145	SC146	SC147	SC148	SC149	SC150	SC151	SC152	SC153	SC154	SC155	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,926	5,944	5,960	5,967	5,971	5,973	5,975	5,977	5,979	5,984	5,984	5,984	63	1.1%
1928-34 Dry Period Average	3,918	3,940	3,948	3,958	3,959	3,959	3,959	3,959	3,959	3,959	3,959	3,959	3,959	41	1.0%
Dry Year Average	5,374	5,397	5,431	5,472	5,493	5,507	5,512	5,517	5,525	5,534	5,541	5,541	5,541	168	3.1%
Critically Dry Year Average	3,421	3,436	3,449	3,468	3,486	3,495	3,506	3,523	3,530	3,538	3,564	3,564	3,564	143	4.2%
Minimum Annual	2,206	2,211	2,240	2,296	2,354	2,373	2,405	2,455	2,457	2,457	2,457	2,457	2,457	250	11.3%

SC_PV2 KLR Results Tb

Table SC-7

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	SC201	SC202	SC203	SC204	SC205	SC206	SC207	SC208	SC209	SC210	SC211	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,812	3,856	3,900	3,916	3,927	3,935	3,939	3,942	3,945	3,951	3,956	3,956	182	4.8%
1928-34 Dry Period Average	3,249	3,254	3,279	3,294	3,294	3,294	3,294	3,294	3,294	3,294	3,294	3,294	3,294	45	1.4%
Dry Year Average	3,484	3,516	3,561	3,634	3,675	3,713	3,736	3,751	3,761	3,763	3,778	3,778	3,778	294	8.4%
Critically Dry Year Average	2,942	2,954	2,967	2,986	2,986	2,986	2,990	2,995	2,995	2,995	3,012	3,040	3,040	98	3.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,871	5,850	5,823	5,813	5,806	5,803	5,801	5,799	5,796	5,795	5,794	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,877	3,886	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,918	0	0.0%
Dry Year Average	5,374	5,333	5,319	5,310	5,305	5,300	5,300	5,300	5,300	5,300	5,300	5,300	5,374	0	0.0%
Critically Dry Year Average	3,421	3,380	3,380	3,380	3,380	3,380	3,380	3,380	3,380	3,380	3,380	3,380	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	SC212	SC213	SC214	SC215	SC216	SC217	SC218	SC219	SC220	SC221	SC222	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,803	3,836	3,873	3,884	3,892	3,896	3,901	3,903	3,906	3,910	3,912	3,912	138	3.7%
1928-34 Dry Period Average	3,249	3,260	3,268	3,277	3,277	3,277	3,277	3,277	3,277	3,277	3,277	3,277	3,277	28	0.9%
Dry Year Average	3,484	3,508	3,539	3,582	3,616	3,639	3,652	3,663	3,674	3,677	3,689	3,698	3,698	214	6.1%
Critically Dry Year Average	2,942	2,951	2,961	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969	2,969	27	0.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,882	5,874	5,857	5,851	5,846	5,844	5,843	5,841	5,841	5,843	5,841	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,881	3,873	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,876	3,918	0	0.0%
Dry Year Average	5,374	5,340	5,336	5,336	5,338	5,338	5,338	5,341	5,343	5,345	5,350	5,348	5,374	0	0.0%
Critically Dry Year Average	3,421	3,381	3,382	3,384	3,384	3,385	3,385	3,386	3,386	3,386	3,387	3,387	3,421	0	0.0%
Minimum Annual	2,206	2,206	2,206	2,213	2,214	2,214	2,214	2,214	2,214	2,214	2,214	2,214	2,214	7	0.3%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	SC223	SC224	SC225	SC226	SC227	SC228	SC229	SC230	SC231	SC232	SC233	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,793	3,816	3,842	3,852	3,857	3,859	3,861	3,863	3,865	3,868	3,868	3,868	94	2.5%
1928-34 Dry Period Average	3,249	3,256	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	13	0.4%
Dry Year Average	3,484	3,500	3,521	3,552	3,565	3,578	3,586	3,594	3,602	3,609	3,624	3,625	3,625	141	4.1%
Critically Dry Year Average	2,942	2,948	2,954	2,965	2,959	2,959	2,959	2,959	2,959	2,959	2,959	2,959	2,965	23	0.8%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,893	5,892	5,886	5,885	5,884	5,883	5,883	5,883	5,884	5,885	5,885	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,884	3,883	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,886	3,918	0	0.0%
Dry Year Average	5,374	5,348	5,356	5,369	5,377	5,381	5,385	5,387	5,389	5,392	5,395	5,395	5,395	21	0.4%
Critically Dry Year Average	3,421	3,382	3,386	3,396	3,401	3,402	3,403	3,404	3,406	3,408	3,410	3,410	3,421	0	0.0%
Minimum Annual	2,206	2,207	2,214	2,240	2,255	2,256	2,257	2,257	2,257	2,257	2,257	2,257	2,257	51	2.3%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	SC234	SC235	SC236	SC237	SC238	SC239	SC240	SC241	SC242	SC243	SC244	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,784	3,795	3,809	3,814	3,817	3,818	3,819	3,820	3,820	3,822	3,822	3,822	48	1.3%
1928-34 Dry Period Average	3,249	3,253	3,255	3,255	3,255	3,255	3,256	3,255	3,255	3,255	3,255	3,256	3,255	6	0.2%
Dry Year Average	3,484	3,492	3,502	3,513	3,516	3,520	3,520	3,520	3,522	3,526	3,532	3,532	3,532	48	1.4%
Critically Dry Year Average	2,942	2,945	2,948	2,953	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,951	2,953	12	0.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,902	5,910	5,915	5,919	5,920	5,922	5,922	5,923	5,925	5,927	5,927	5,927	6	0.1%
1928-34 Dry Period Average	3,918	3,890	3,893	3,898	3,898	3,898	3,898	3,898	3,898	3,898	3,898	3,898	3,918	0	0.0%
Dry Year Average	5,374	5,357	5,375	5,405	5,422	5,428	5,431	5,434	5,437	5,441	5,449	5,449	5,449	75	1.4%
Critically Dry Year Average	3,421	3,385	3,393	3,408	3,418	3,421	3,425	3,428	3,430	3,433	3,440	3,440	3,440	19	0.6%
Minimum Annual	2,206	2,209	2,226	2,267	2,300	2,305	2,308	2,309	2,309	2,309	2,309	2,309	2,309	103	4.6%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	SC245	SC246	SC247	SC248	SC249	SC250	SC251	SC252	SC253	SC254	SC255	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,911	5,929	5,944	5,952	5,956	5,958	5,960	5,961	5,964	5,968	5,968	5,968	47	0.8%
1928-34 Dry Period Average	3,918	3,895	3,902	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,913	3,918	0	0.0%
Dry Year Average	5,374	5,365	5,395	5,440	5,461	5,476	5,480	5,485	5,493	5,502	5,513	5,513	5,513	139	2.6%
Critically Dry Year Average	3,421	3,388	3,400	3,420	3,438	3,446	3,458	3,475	3,482	3,490	3,512	3,512	3,512	91	2.7%
Minimum Annual	2,206	2,211	2,240	2,294	2,350	2,371	2,400	2,451	2,453	2,453	2,453	2,453	2,453	247	11.2%

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Table SC-8

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 1	SC301	SC302	SC303	SC304	SC305	SC306	SC307	SC308	SC309	SC310	SC311	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,791	3,802	3,811	3,816	3,819	3,820	3,821	3,821	3,821	3,821	3,821	3,821	47	1.2%
1928-34 Dry Period Average	3,249	3,270	3,286	3,290	3,290	3,290	3,290	3,290	3,290	3,290	3,290	3,290	3,290	42	1.3%
Dry Year Average	3,484	3,512	3,532	3,552	3,561	3,563	3,563	3,563	3,563	3,563	3,563	3,563	3,563	79	2.3%
Critically Dry Year Average	2,942	2,959	2,985	3,008	3,027	3,040	3,049	3,051	3,051	3,051	3,051	3,051	3,051	109	3.7%
Minimum Annual	2,410	2,423	2,452	2,460	2,460	2,460	2,460	2,460	2,460	2,460	2,460	2,460	2,460	50	2.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,916	5,907	5,895	5,886	5,881	5,876	5,874	5,871	5,868	5,863	5,859	5,921	0	0.0%
1928-34 Dry Period Average	3,918	3,926	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,924	3,926	8	0.2%
Dry Year Average	6,374	6,386	6,384	6,378	6,377	6,369	6,367	6,366	6,365	6,364	6,363	6,362	6,386	13	0.2%
Critically Dry Year Average	3,421	3,429	3,428	3,428	3,428	3,428	3,428	3,428	3,428	3,428	3,428	3,428	3,429	8	0.2%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 1	SC312	SC313	SC314	SC315	SC316	SC317	SC318	SC319	SC320	SC321	SC322	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,787	3,798	3,805	3,811	3,815	3,817	3,818	3,819	3,819	3,819	3,819	3,819	45	1.2%
1928-34 Dry Period Average	3,249	3,265	3,278	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	3,281	32	1.0%
Dry Year Average	3,484	3,505	3,525	3,541	3,556	3,560	3,562	3,562	3,562	3,562	3,562	3,562	3,562	78	2.2%
Critically Dry Year Average	2,942	2,954	2,970	2,991	3,005	3,020	3,030	3,038	3,044	3,044	3,044	3,044	3,044	102	3.5%
Minimum Annual	2,410	2,413	2,436	2,436	2,436	2,436	2,436	2,436	2,436	2,436	2,436	2,436	2,436	26	1.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,924	5,927	5,924	5,922	5,917	5,914	5,912	5,910	5,907	5,901	5,896	5,927	5	0.1%
1928-34 Dry Period Average	3,918	3,929	3,927	3,927	3,927	3,927	3,927	3,927	3,927	3,927	3,927	3,927	3,929	11	0.3%
Dry Year Average	6,374	6,391	6,397	6,396	6,396	6,389	6,388	6,389	6,390	6,390	6,395	6,402	6,402	28	0.5%
Critically Dry Year Average	3,421	3,429	3,429	3,429	3,429	3,429	3,429	3,429	3,429	3,429	3,429	3,429	3,429	8	0.2%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 50%

Run Identifiers	Base 1	SC323	SC324	SC325	SC326	SC327	SC328	SC329	SC330	SC331	SC342	SC333	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,783	3,792	3,799	3,804	3,808	3,811	3,813	3,814	3,815	3,817	3,817	3,817	43	1.1%
1928-34 Dry Period Average	3,249	3,260	3,269	3,271	3,271	3,271	3,271	3,271	3,271	3,271	3,271	3,271	3,271	22	0.7%
Dry Year Average	3,484	3,499	3,514	3,529	3,540	3,549	3,554	3,556	3,558	3,558	3,558	3,558	3,558	74	2.1%
Critically Dry Year Average	2,942	2,950	2,957	2,972	2,984	2,994	3,002	3,012	3,018	3,023	3,034	3,038	3,038	96	3.3%
Minimum Annual	2,410	2,412	2,415	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	6	0.3%
Ag & Urban Benefits															
71-Year Average	5,921	5,933	5,942	5,946	5,944	5,941	5,939	5,935	5,932	5,930	5,928	5,930	5,946	25	0.4%
1928-34 Dry Period Average	3,918	3,932	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,931	3,932	14	0.3%
Dry Year Average	6,374	6,397	6,407	6,411	6,410	6,407	6,412	6,419	6,426	6,432	6,438	6,450	6,450	77	1.4%
Critically Dry Year Average	3,421	3,430	3,430	3,430	3,430	3,430	3,430	3,430	3,430	3,430	3,430	3,430	3,430	9	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 1	SC334	SC335	SC336	SC337	SC338	SC339	SC340	SC341	SC342	SC343	SC344	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,779	3,784	3,790	3,794	3,796	3,798	3,799	3,800	3,801	3,802	3,803	3,803	29	0.8%
1928-34 Dry Period Average	3,249	3,254	3,259	3,260	3,260	3,260	3,260	3,260	3,260	3,260	3,260	3,260	3,260	11	0.3%
Dry Year Average	3,484	3,491	3,500	3,512	3,519	3,523	3,526	3,530	3,530	3,531	3,534	3,535	3,535	52	1.5%
Critically Dry Year Average	2,942	2,945	2,949	2,954	2,959	2,965	2,972	2,977	2,981	2,984	2,988	2,992	2,992	50	1.7%
Minimum Annual	2,410	2,411	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	2,413	3	0.1%
Ag & Urban Benefits															
71-Year Average	5,921	5,942	5,957	5,964	5,965	5,965	5,964	5,961	5,962	5,964	5,966	5,964	5,966	45	0.8%
1928-34 Dry Period Average	3,918	3,934	3,934	3,934	3,934	3,934	3,934	3,934	3,934	3,934	3,934	3,934	3,934	16	0.4%
Dry Year Average	6,374	6,403	6,415	6,426	6,428	6,439	6,450	6,459	6,467	6,477	6,491	6,484	6,491	118	2.2%
Critically Dry Year Average	3,421	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	3,431	11	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Facilities Allocation Factor = 100%

Run Identifiers	Base 1	SC345	SC346	SC347	SC348	SC349	SC350	SC351	SC352	SC353	SC354	SC355	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	3,774	0	0.0%
1928-34 Dry Period Average	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	3,249	0	0.0%
Dry Year Average	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	3,484	0	0.0%
Critically Dry Year Average	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	2,942	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	5,921	5,951	5,972	5,986	5,992	5,993	5,994	5,996	6,000	6,003	6,003	6,003	6,003	82	1.4%
1928-34 Dry Period Average	3,918	3,937	3,937	3,937	3,937	3,937	3,937	3,937	3,937	3,937	3,937	3,937	3,937	19	0.5%
Dry Year Average	6,374	6,410	6,430	6,447	6,459	6,473	6,488	6,503	6,518	6,531	6,531	6,531	6,531	157	2.9%
Critically Dry Year Average	3,421	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	3,433	12	0.3%
Minimum Annual	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	0	0.0%

Table SC-9

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	SC401	SC402	SC403	SC404	SC405	SC406	SC407	SC408	SC409	SC410	SC411	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,825	3,886	3,938	3,968	3,986	4,000	4,013	4,025	4,038	4,062	4,075	4,075	307	8.1%
1928-34 Dry Period Average	3,195	3,222	3,258	3,291	3,325	3,334	3,334	3,334	3,334	3,334	3,334	3,334	3,334	139	4.4%
Dry Year Average	3,456	3,523	3,590	3,669	3,733	3,791	3,823	3,844	3,871	3,889	3,934	3,937	3,937	481	13.9%
Critically Dry Year Average	2,938	2,947	2,964	3,007	3,051	3,079	3,100	3,122	3,143	3,165	3,230	3,270	3,270	332	11.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,139	6,124	6,117	6,110	6,105	6,099	6,095	6,092	6,089	6,088	6,086	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,023	4,011	4,011	4,011	4,004	4,004	4,004	4,004	4,004	4,004	4,004	4,033	0	0.0%
Dry Year Average	5,635	5,574	5,557	5,562	5,552	5,551	5,547	5,543	5,543	5,543	5,543	5,543	5,635	0	0.0%
Critically Dry Year Average	3,480	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,468	3,467	3,467	3,467	3,480	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	SC412	SC413	SC414	SC415	SC416	SC417	SC418	SC419	SC420	SC421	SC422	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,811	3,859	3,904	3,927	3,942	3,955	3,967	3,977	3,986	4,004	4,017	4,017	249	6.6%
1928-34 Dry Period Average	3,195	3,215	3,242	3,267	3,292	3,292	3,292	3,292	3,292	3,292	3,292	3,292	3,292	96	3.1%
Dry Year Average	3,456	3,506	3,564	3,606	3,656	3,719	3,759	3,790	3,808	3,820	3,861	3,878	3,878	421	12.2%
Critically Dry Year Average	2,938	2,945	2,955	2,985	3,018	3,035	3,051	3,067	3,083	3,099	3,132	3,181	3,181	243	8.3%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,157	6,163	6,177	6,184	6,187	6,188	6,190	6,194	6,198	6,196	6,194	6,198	29	0.5%
1928-34 Dry Period Average	4,033	4,030	4,027	4,036	4,030	4,030	4,030	4,030	4,030	4,030	4,030	4,030	4,036	3	0.1%
Dry Year Average	5,635	5,590	5,590	5,590	5,596	5,600	5,599	5,597	5,598	5,602	5,610	5,617	5,635	0	0.0%
Critically Dry Year Average	3,480	3,470	3,473	3,471	3,477	3,481	3,480	3,480	3,480	3,485	3,488	3,485	3,488	9	0.2%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	SC423	SC424	SC425	SC426	SC427	SC428	SC429	SC430	SC431	SC432	SC433	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,797	3,831	3,863	3,877	3,889	3,896	3,903	3,910	3,924	3,935	3,942	3,942	174	4.6%
1928-34 Dry Period Average	3,195	3,208	3,226	3,243	3,260	3,264	3,264	3,264	3,264	3,264	3,264	3,264	3,264	69	2.2%
Dry Year Average	3,456	3,489	3,521	3,553	3,586	3,625	3,655	3,685	3,710	3,721	3,745	3,773	3,773	317	9.2%
Critically Dry Year Average	2,938	2,943	2,950	2,964	2,987	2,999	3,010	3,021	3,031	3,042	3,064	3,085	3,085	147	5.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,174	6,197	6,230	6,246	6,256	6,263	6,267	6,271	6,277	6,281	6,285	6,285	116	1.9%
1928-34 Dry Period Average	4,033	4,037	4,043	4,061	4,060	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,061	28	0.7%
Dry Year Average	5,635	5,607	5,623	5,632	5,647	5,652	5,662	5,676	5,684	5,703	5,714	5,718	5,718	82	1.5%
Critically Dry Year Average	3,480	3,472	3,473	3,483	3,483	3,487	3,497	3,496	3,494	3,492	3,489	3,500	3,500	20	0.6%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	SC434	SC435	SC436	SC437	SC438	SC439	SC440	SC441	SC442	SC443	SC444	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,783	3,801	3,820	3,829	3,835	3,840	3,845	3,849	3,852	3,858	3,862	3,862	93	2.5%
1928-34 Dry Period Average	3,195	3,202	3,210	3,219	3,222	3,222	3,222	3,222	3,222	3,222	3,222	3,222	3,222	27	0.9%
Dry Year Average	3,456	3,473	3,489	3,505	3,517	3,532	3,547	3,562	3,577	3,590	3,609	3,620	3,620	164	4.7%
Critically Dry Year Average	2,938	2,941	2,944	2,951	2,960	2,966	2,966	2,966	2,966	2,976	2,984	2,993	2,993	55	1.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,191	6,231	6,277	6,304	6,322	6,329	6,341	6,349	6,357	6,366	6,372	6,372	203	3.3%
1928-34 Dry Period Average	4,033	4,044	4,059	4,084	4,082	4,082	4,082	4,082	4,082	4,082	4,082	4,082	4,084	50	1.3%
Dry Year Average	5,635	5,623	5,655	5,674	5,694	5,716	5,754	5,793	5,830	5,860	5,862	5,857	5,862	227	4.0%
Critically Dry Year Average	3,480	3,474	3,477	3,484	3,493	3,506	3,514	3,514	3,514	3,514	3,515	3,515	3,515	35	1.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	SC445	SC446	SC447	SC448	SC449	SC450	SC451	SC452	SC453	SC454	SC455	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,207	6,263	6,325	6,362	6,387	6,401	6,415	6,427	6,439	6,452	6,461	6,461	292	4.7%
1928-34 Dry Period Average	4,033	4,051	4,076	4,107	4,107	4,107	4,107	4,107	4,107	4,107	4,107	4,107	4,107	73	1.8%
Dry Year Average	5,635	5,641	5,688	5,716	5,761	5,806	5,867	5,935	5,977	6,007	6,010	6,036	6,036	400	7.1%
Critically Dry Year Average	3,480	3,474	3,483	3,489	3,510	3,531	3,552	3,552	3,552	3,552	3,558	3,596	3,596	116	3.3%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

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Table SC-10

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%															
Run Identifiers	Base 2	SC501	SC502	SC503	SC504	SC505	SC506	SC507	SC508	SC509	SC510	SC511	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,805	3,826	3,842	3,851	3,856	3,860	3,862	3,862	3,862	3,862	3,862	3,862	93	2.5%
1928-34 Dry Period Average	3,195	3,226	3,260	3,291	3,320	3,348	3,358	3,358	3,358	3,358	3,358	3,358	3,358	163	5.1%
Dry Year Average	3,456	3,540	3,572	3,584	3,602	3,603	3,603	3,603	3,603	3,603	3,603	3,603	3,603	146	4.2%
Critically Dry Year Average	2,938	2,962	3,019	3,082	3,127	3,181	3,186	3,197	3,197	3,197	3,197	3,197	3,197	259	8.8%
Minimum Annual	2,410	2,410	2,500	2,541	2,725	2,821	2,821	2,821	2,821	2,821	2,821	2,821	2,821	410	17.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,114	6,106	6,102	6,098	6,095	6,094	6,092	6,091	6,090	6,084	6,084	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,021	4,019	4,019	4,019	4,019	4,019	4,019	4,019	4,019	4,019	4,019	4,033	0	0.0%
Dry Year Average	5,635	5,590	5,577	5,574	5,573	5,572	5,571	5,570	5,567	5,564	5,558	5,555	5,635	0	0.0%
Critically Dry Year Average	3,480	3,491	3,490	3,490	3,490	3,490	3,490	3,490	3,490	3,490	3,490	3,490	3,491	11	0.3%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%															
Run Identifiers	Base 2	SC512	SC513	SC514	SC515	SC516	SC517	SC518	SC519	SC520	SC521	SC522	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,798	3,819	3,833	3,842	3,847	3,850	3,852	3,855	3,856	3,856	3,856	3,856	88	2.3%
1928-34 Dry Period Average	3,195	3,218	3,244	3,269	3,291	3,313	3,321	3,321	3,321	3,321	3,321	3,321	3,321	126	4.0%
Dry Year Average	3,456	3,522	3,567	3,582	3,595	3,595	3,595	3,595	3,595	3,595	3,595	3,595	3,595	138	4.0%
Critically Dry Year Average	2,938	2,956	2,988	3,049	3,082	3,117	3,136	3,149	3,162	3,174	3,174	3,174	3,174	236	8.0%
Minimum Annual	2,410	2,410	2,450	2,450	2,544	2,697	2,718	2,718	2,718	2,718	2,718	2,718	2,718	308	12.8%
Ag & Urban Benefits															
71-Year Average	6,169	6,129	6,106	6,148	6,157	6,169	6,178	6,182	6,187	6,191	6,199	6,207	6,207	38	0.6%
1928-34 Dry Period Average	4,033	4,029	4,036	4,044	4,053	4,062	4,057	4,057	4,057	4,057	4,057	4,057	4,062	28	0.7%
Dry Year Average	5,635	5,608	5,612	5,628	5,641	5,659	5,673	5,679	5,686	5,691	5,703	5,721	5,721	86	1.5%
Critically Dry Year Average	3,480	3,494	3,496	3,507	3,511	3,515	3,521	3,525	3,531	3,537	3,548	3,560	3,560	81	2.3%
Minimum Annual	2,184	2,184	2,187	2,201	2,215	2,230	2,245	2,260	2,275	2,290	2,322	2,352	2,352	169	7.7%

Facilities Allocation Factor = 50%															
Run Identifiers	Base 2	SC523	SC524	SC525	SC526	SC527	SC528	SC529	SC530	SC531	SC532	SC533	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,788	3,808	3,820	3,829	3,836	3,840	3,842	3,843	3,845	3,847	3,850	3,850	82	2.2%
1928-34 Dry Period Average	3,195	3,210	3,228	3,245	3,261	3,276	3,282	3,282	3,282	3,282	3,282	3,282	3,282	87	2.7%
Dry Year Average	3,456	3,500	3,544	3,563	3,571	3,585	3,590	3,590	3,590	3,590	3,590	3,590	3,590	134	3.9%
Critically Dry Year Average	2,938	2,950	2,965	3,003	3,038	3,061	3,077	3,088	3,097	3,107	3,123	3,141	3,141	203	6.9%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,449	2,487	2,487	2,487	2,487	2,487	2,487	2,487	77	3.2%
Ag & Urban Benefits															
71-Year Average	6,169	6,143	6,158	6,183	6,200	6,213	6,223	6,232	6,242	6,245	6,256	6,269	6,269	100	1.6%
1928-34 Dry Period Average	4,033	4,037	4,053	4,069	4,086	4,103	4,103	4,103	4,103	4,103	4,103	4,103	4,103	70	1.7%
Dry Year Average	5,635	5,626	5,647	5,679	5,708	5,725	5,746	5,770	5,793	5,804	5,836	5,874	5,874	239	4.2%
Critically Dry Year Average	3,480	3,498	3,508	3,526	3,537	3,548	3,560	3,572	3,584	3,596	3,619	3,640	3,640	161	4.6%
Minimum Annual	2,184	2,185	2,200	2,228	2,256	2,286	2,318	2,348	2,379	2,410	2,475	2,581	2,581	397	18.2%

Facilities Allocation Factor = 75%															
Run Identifiers	Base 2	SC534	SC535	SC536	SC537	SC538	SC539	SC540	SC541	SC542	SC543	SC544	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,779	3,791	3,803	3,810	3,814	3,817	3,821	3,824	3,827	3,832	3,833	3,833	65	1.7%
1928-34 Dry Period Average	3,195	3,202	3,212	3,220	3,228	3,237	3,240	3,240	3,240	3,240	3,240	3,240	3,240	45	1.4%
Dry Year Average	3,456	3,478	3,504	3,525	3,540	3,545	3,552	3,559	3,565	3,572	3,583	3,583	3,583	127	3.7%
Critically Dry Year Average	2,938	2,943	2,950	2,963	2,977	2,993	3,006	3,017	3,025	3,030	3,035	3,042	3,042	103	3.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,155	6,182	6,215	6,235	6,251	6,262	6,274	6,283	6,288	6,306	6,318	6,318	149	2.4%
1928-34 Dry Period Average	4,033	4,044	4,069	4,093	4,118	4,142	4,145	4,145	4,145	4,145	4,145	4,145	4,145	112	2.8%
Dry Year Average	5,635	5,645	5,686	5,734	5,769	5,799	5,831	5,868	5,899	5,918	5,963	5,997	5,997	362	6.4%
Critically Dry Year Average	3,480	3,503	3,518	3,546	3,566	3,592	3,612	3,629	3,645	3,661	3,700	3,739	3,739	259	7.4%
Minimum Annual	2,184	2,189	2,213	2,255	2,299	2,344	2,380	2,438	2,499	2,578	2,597	2,617	2,617	433	19.8%

Facilities Allocation Factor = 100%															
Run Identifiers	Base 2	SC545	SC546	SC547	SC548	SC549	SC550	SC551	SC552	SC553	SC554	SC555	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,166	6,204	6,246	6,270	6,285	6,300	6,315	6,324	6,332	6,354	6,371	6,371	202	3.3%
1928-34 Dry Period Average	4,033	4,052	4,095	4,118	4,150	4,181	4,188	4,188	4,188	4,188	4,188	4,188	4,188	155	3.8%
Dry Year Average	5,635	5,665	5,727	5,786	5,830	5,874	5,919	5,955	5,979	6,006	6,056	6,083	6,083	447	7.9%
Critically Dry Year Average	3,480	3,508	3,529	3,567	3,596	3,637	3,664	3,689	3,714	3,740	3,791	3,842	3,842	362	10.4%
Minimum Annual	2,184	2,194	2,227	2,284	2,343	2,403	2,465	2,581	2,594	2,607	2,634	2,663	2,663	479	21.9%

Table SC-11

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%

Run Identifiers	Base 2	SC601	SC602	SC603	SC604	SC605	SC606	SC607	SC608	SC609	SC610	SC611	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,830	3,895	3,951	3,980	3,999	4,013	4,026	4,039	4,051	4,075	4,090	4,090	322	8.5%
1928-34 Dry Period Average	3,195	3,227	3,263	3,296	3,330	3,349	3,349	3,349	3,349	3,349	3,349	3,349	3,349	156	4.8%
Dry Year Average	3,458	3,535	3,613	3,705	3,771	3,824	3,857	3,879	3,906	3,925	3,959	3,973	3,973	516	14.9%
Critically Dry Year Average	2,938	2,953	2,970	3,013	3,057	3,091	3,112	3,134	3,155	3,189	3,282	3,303	3,303	365	12.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,087	6,072	6,056	6,059	6,056	6,051	6,047	6,045	6,041	6,039	6,038	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,001	3,999	3,999	3,999	3,999	3,999	3,999	3,999	3,999	3,999	3,999	4,033	0	0.0%
Dry Year Average	5,635	5,535	5,513	5,509	5,509	5,509	5,504	5,502	5,502	5,502	5,502	5,502	5,635	0	0.0%
Critically Dry Year Average	3,480	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,480	0	0.0%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%

Run Identifiers	Base 2	SC612	SC613	SC614	SC615	SC616	SC617	SC618	SC619	SC620	SC621	SC622	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,815	3,866	3,913	3,937	3,952	3,965	3,975	3,985	3,994	4,011	4,024	4,024	256	6.8%
1928-34 Dry Period Average	3,195	3,219	3,245	3,271	3,296	3,305	3,305	3,305	3,305	3,305	3,305	3,305	3,305	110	3.4%
Dry Year Average	3,458	3,516	3,571	3,637	3,678	3,734	3,775	3,800	3,817	3,833	3,869	3,872	3,872	416	12.0%
Critically Dry Year Average	2,938	2,950	2,960	2,980	3,026	3,049	3,066	3,082	3,098	3,114	3,151	3,206	3,206	268	9.1%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,105	6,107	6,116	6,121	6,126	6,128	6,129	6,130	6,134	6,139	6,142	6,169	0	0.0%
1928-34 Dry Period Average	4,033	4,009	4,016	4,024	4,033	4,036	4,036	4,036	4,036	4,036	4,036	4,036	4,036	3	0.1%
Dry Year Average	5,635	5,556	5,552	5,566	5,573	5,583	5,588	5,597	5,601	5,608	5,616	5,625	5,635	0	0.0%
Critically Dry Year Average	3,480	3,459	3,463	3,472	3,476	3,480	3,485	3,489	3,494	3,498	3,508	3,518	3,518	38	1.1%
Minimum Annual	2,184	2,184	2,187	2,200	2,214	2,228	2,243	2,257	2,273	2,289	2,321	2,352	2,352	168	7.7%

Facilities Allocation Factor = 50%

Run Identifiers	Base 2	SC623	SC624	SC625	SC626	SC627	SC628	SC629	SC630	SC631	SC632	SC633	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,799	3,836	3,873	3,893	3,905	3,915	3,923	3,930	3,936	3,947	3,957	3,957	188	5.0%
1928-34 Dry Period Average	3,195	3,211	3,229	3,246	3,263	3,260	3,260	3,260	3,260	3,260	3,260	3,260	3,263	68	2.1%
Dry Year Average	3,458	3,496	3,533	3,568	3,592	3,619	3,656	3,681	3,699	3,710	3,734	3,754	3,754	297	8.6%
Critically Dry Year Average	2,938	2,946	2,953	2,970	2,995	3,004	3,015	3,026	3,037	3,048	3,070	3,092	3,092	153	5.2%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,120	6,133	6,154	6,167	6,179	6,187	6,191	6,195	6,200	6,209	6,218	6,218	49	0.8%
1928-34 Dry Period Average	4,033	4,017	4,033	4,049	4,066	4,081	4,081	4,081	4,081	4,081	4,081	4,081	4,081	48	1.2%
Dry Year Average	5,635	5,575	5,592	5,620	5,646	5,661	5,681	5,704	5,719	5,735	5,765	5,786	5,786	153	2.7%
Critically Dry Year Average	3,480	3,463	3,473	3,491	3,501	3,511	3,523	3,534	3,545	3,556	3,579	3,603	3,603	123	3.5%
Minimum Annual	2,184	2,185	2,200	2,227	2,255	2,286	2,312	2,343	2,376	2,406	2,469	2,538	2,538	354	16.2%

Facilities Allocation Factor = 75%

Run Identifiers	Base 2	SC634	SC635	SC636	SC637	SC638	SC639	SC640	SC641	SC642	SC643	SC644	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,784	3,803	3,825	3,840	3,845	3,852	3,860	3,866	3,871	3,878	3,882	3,882	114	3.0%
1928-34 Dry Period Average	3,195	3,203	3,212	3,221	3,229	3,225	3,223	3,223	3,223	3,223	3,223	3,223	3,229	34	1.1%
Dry Year Average	3,458	3,476	3,496	3,510	3,516	3,526	3,537	3,549	3,558	3,570	3,588	3,601	3,601	145	4.2%
Critically Dry Year Average	2,938	2,942	2,945	2,951	2,960	2,964	2,968	2,974	2,979	2,985	2,996	3,007	3,007	69	2.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,133	6,158	6,190	6,209	6,227	6,236	6,244	6,249	6,256	6,269	6,284	6,284	115	1.9%
1928-34 Dry Period Average	4,033	4,024	4,049	4,073	4,098	4,122	4,124	4,124	4,124	4,124	4,124	4,124	4,124	91	2.2%
Dry Year Average	5,635	5,597	5,632	5,679	5,720	5,750	5,783	5,818	5,844	5,870	5,909	5,941	5,941	305	5.4%
Critically Dry Year Average	3,480	3,468	3,484	3,511	3,531	3,557	3,576	3,593	3,611	3,628	3,666	3,704	3,704	224	6.4%
Minimum Annual	2,184	2,189	2,213	2,254	2,297	2,342	2,387	2,435	2,480	2,528	2,594	2,612	2,612	429	19.6%

Facilities Allocation Factor = 100%

Run Identifiers	Base 2	SC645	SC646	SC647	SC648	SC649	SC650	SC651	SC652	SC653	SC654	SC655	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	3,458	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,145	6,183	6,225	6,249	6,265	6,280	6,295	6,305	6,313	6,334	6,348	6,348	179	2.9%
1928-34 Dry Period Average	4,033	4,032	4,066	4,098	4,130	4,162	4,168	4,168	4,168	4,168	4,168	4,166	4,168	134	3.3%
Dry Year Average	5,635	5,618	5,678	5,736	5,782	5,826	5,871	5,914	5,944	5,973	6,028	6,051	6,051	416	7.4%
Critically Dry Year Average	3,480	3,473	3,494	3,532	3,565	3,602	3,629	3,658	3,684	3,710	3,760	3,812	3,812	332	9.6%
Minimum Annual	2,184	2,194	2,226	2,283	2,340	2,401	2,463	2,527	2,594	2,607	2,634	2,662	2,662	478	21.9%

Table SC-12

South of Delta Off-Aqueduct Storage
Total Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%															
Run Identifiers	Base 2	SC701	SC702	SC703	SC704	SC705	SC706	SC707	SC708	SC709	SC710	SC711	Maximum Total Value	Maximum Net Increase	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,802	3,822	3,839	3,848	3,854	3,857	3,859	3,860	3,860	3,860	3,860	3,860	92	2.4%
1928-34 Dry Period Average	3,195	3,222	3,256	3,287	3,315	3,343	3,345	3,345	3,345	3,345	3,345	3,345	3,345	151	4.7%
Dry Year Average	3,456	3,533	3,566	3,592	3,602	3,603	3,603	3,603	3,603	3,603	3,603	3,603	3,603	146	4.2%
Critically Dry Year Average	2,938	2,954	3,006	3,069	3,111	3,145	3,164	3,182	3,189	3,189	3,189	3,189	3,189	251	8.5%
Minimum Annual	2,410	2,410	2,492	2,533	2,699	2,796	2,814	2,814	2,814	2,814	2,814	2,814	2,814	404	16.7%
Ag & Urban Benefits															
71-Year Average	6,166	6,166	6,158	6,154	6,150	6,146	6,144	6,142	6,141	6,139	6,137	6,136	6,166	0	0.0%
1928-34 Dry Period Average	4,033	4,043	4,031	4,031	4,031	4,028	4,024	4,024	4,024	4,024	4,024	4,024	4,043	10	0.2%
Dry Year Average	5,635	5,629	5,617	5,614	5,612	5,611	5,609	5,607	5,606	5,599	5,598	5,598	5,635	0	0.0%
Critically Dry Year Average	3,480	3,503	3,503	3,502	3,502	3,502	3,502	3,502	3,502	3,502	3,501	3,501	3,503	23	0.7%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 25%															
Run Identifiers	Base 2	SC712	SC713	SC714	SC715	SC716	SC717	SC718	SC719	SC720	SC721	SC722	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,795	3,815	3,829	3,840	3,846	3,848	3,850	3,852	3,854	3,855	3,855	3,855	87	2.3%
1928-34 Dry Period Average	3,195	3,215	3,241	3,265	3,287	3,309	3,311	3,311	3,311	3,311	3,311	3,311	3,311	116	3.6%
Dry Year Average	3,456	3,516	3,557	3,572	3,581	3,595	3,595	3,595	3,595	3,595	3,595	3,595	3,595	138	4.0%
Critically Dry Year Average	2,938	2,950	2,981	3,041	3,075	3,105	3,119	3,132	3,146	3,160	3,168	3,168	3,168	230	7.8%
Minimum Annual	2,410	2,410	2,444	2,444	2,537	2,689	2,699	2,699	2,699	2,699	2,699	2,699	2,699	289	12.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,181	6,192	6,215	6,227	6,237	6,246	6,255	6,263	6,270	6,280	6,289	6,289	120	2.0%
1928-34 Dry Period Average	4,033	4,050	4,047	4,058	4,065	4,053	4,051	4,051	4,051	4,051	4,051	4,051	4,065	31	0.8%
Dry Year Average	5,635	5,643	5,646	5,664	5,675	5,677	5,679	5,681	5,686	5,686	5,687	5,693	5,693	58	1.0%
Critically Dry Year Average	3,480	3,505	3,507	3,506	3,512	3,516	3,515	3,515	3,515	3,519	3,530	3,540	3,540	61	1.7%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	0	0.0%

Facilities Allocation Factor = 50%															
Run Identifiers	Base 2	SC723	SC724	SC725	SC726	SC727	SC728	SC729	SC730	SC731	SC732	SC733	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,787	3,805	3,817	3,825	3,833	3,838	3,840	3,841	3,843	3,845	3,848	3,848	80	2.1%
1928-34 Dry Period Average	3,195	3,208	3,226	3,242	3,258	3,273	3,274	3,274	3,274	3,274	3,274	3,274	3,274	80	2.5%
Dry Year Average	3,456	3,496	3,536	3,554	3,564	3,577	3,589	3,590	3,590	3,590	3,590	3,590	3,590	134	3.9%
Critically Dry Year Average	2,938	2,946	2,960	2,998	3,033	3,055	3,067	3,076	3,085	3,094	3,112	3,130	3,130	191	6.5%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,439	2,448	2,448	2,448	2,448	2,448	2,448	2,448	38	1.6%
Ag & Urban Benefits															
71-Year Average	6,169	6,196	6,225	6,263	6,285	6,301	6,313	6,324	6,332	6,337	6,353	6,356	6,356	187	3.0%
1928-34 Dry Period Average	4,033	4,057	4,063	4,081	4,096	4,078	4,077	4,077	4,077	4,077	4,077	4,077	4,096	62	1.5%
Dry Year Average	5,635	5,658	5,678	5,704	5,708	5,722	5,739	5,752	5,772	5,787	5,833	5,837	5,837	202	3.6%
Critically Dry Year Average	3,480	3,507	3,508	3,518	3,517	3,521	3,532	3,542	3,553	3,564	3,585	3,595	3,595	115	3.3%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,196	2,196	12	0.5%

Facilities Allocation Factor = 75%															
Run Identifiers	Base 2	SC734	SC735	SC736	SC737	SC738	SC739	SC740	SC741	SC742	SC743	SC744	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,778	3,789	3,800	3,804	3,808	3,811	3,814	3,817	3,820	3,825	3,829	3,829	60	1.6%
1928-34 Dry Period Average	3,195	3,201	3,210	3,219	3,227	3,235	3,235	3,235	3,235	3,235	3,235	3,236	3,235	41	1.3%
Dry Year Average	3,456	3,476	3,499	3,521	3,530	3,534	3,538	3,544	3,551	3,559	3,568	3,577	3,577	120	3.5%
Critically Dry Year Average	2,938	2,941	2,948	2,961	2,977	2,989	3,002	3,012	3,021	3,027	3,035	3,039	3,039	101	3.4%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,214	6,255	6,305	6,338	6,359	6,371	6,384	6,395	6,404	6,414	6,421	6,421	252	4.1%
1928-34 Dry Period Average	4,033	4,064	4,079	4,105	4,111	4,103	4,102	4,102	4,102	4,102	4,102	4,102	4,111	78	1.9%
Dry Year Average	5,635	5,674	5,709	5,733	5,756	5,779	5,816	5,861	5,905	5,928	5,941	5,932	5,941	306	5.4%
Critically Dry Year Average	3,480	3,508	3,512	3,519	3,528	3,543	3,559	3,575	3,591	3,600	3,599	3,599	3,600	120	3.5%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,208	2,199	2,195	2,208	24	1.1%

Facilities Allocation Factor = 100%															
Run Identifiers	Base 2	SC745	SC746	SC747	SC748	SC749	SC750	SC751	SC752	SC753	SC754	SC755	Maximum Total Value	Maximum Net Value	Maximum Increase (percent)
Maximum Storage Volume (TAF)	0	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000			
Environmental Benefits															
71-Year Average	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	3,768	0	0.0%
1928-34 Dry Period Average	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	3,195	0	0.0%
Dry Year Average	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	3,456	0	0.0%
Critically Dry Year Average	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	2,938	0	0.0%
Minimum Annual	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	2,410	0	0.0%
Ag & Urban Benefits															
71-Year Average	6,169	6,229	6,286	6,351	6,389	6,416	6,430	6,448	6,461	6,473	6,485	6,495	6,495	326	5.3%
1928-34 Dry Period Average	4,033	4,071	4,095	4,128	4,128	4,128	4,128	4,128	4,128	4,128	4,128	4,128	4,128	94	2.3%
Dry Year Average	5,635	5,693	5,743	5,773	5,808	5,862	5,924	5,982	6,011	6,040	6,057	6,086	6,086	451	8.0%
Critically Dry Year Average	3,480	3,509	3,518	3,523	3,544	3,565	3,586	3,605	3,605	3,605	3,633	3,672	3,672	192	5.5%
Minimum Annual	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,184	2,420	2,547	2,547	363	16.6%

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Table SC-13

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC001	SC002	SC003	SC004	SC005	SC006	SC007	SC008	SC009	SC010	SC011
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	33	74	113	127	136	141	144	147	150	156	156
1928-34 Dry Period Average	13	18	22	22	22	22	22	22	22	22	22
Dry Year Average	30	70	131	168	193	208	222	222	229	253	253
Critically Dry Year Average	8	21	32	32	32	32	32	32	32	37	37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-26	-49	-75	-84	-88	-91	-93	-95	-96	-97	-97
1928-34 Dry Period Average	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39	-39
Dry Year Average	-22	-38	-45	-55	-55	-55	-55	-55	-55	-55	-55
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC012	SC013	SC014	SC015	SC016	SC017	SC018	SC019	SC020	SC021	SC022
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	25	56	88	101	106	109	111	114	116	119	119
1928-34 Dry Period Average	10	10	10	10	10	10	10	10	10	10	10
Dry Year Average	22	50	91	122	136	147	159	170	174	174	174
Critically Dry Year Average	6	16	20	20	20	20	20	20	20	20	20
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-16	-25	-42	-48	-51	-54	-54	-54	-53	-55	-55
1928-34 Dry Period Average	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
Dry Year Average	-16	-25	-31	-35	-35	-35	-35	-35	-32	-35	-35
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 50%											
Run Identifiers	SC023	SC024	SC025	SC026	SC027	SC028	SC029	SC030	SC031	SC032	SC033
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	17	37	59	68	71	73	75	77	78	80	80
1928-34 Dry Period Average	7	7	7	7	7	7	7	7	7	7	7
Dry Year Average	15	33	53	71	80	88	95	103	110	117	117
Critically Dry Year Average	4	10	13	13	13	13	13	13	13	13	13
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-5	-4	-10	-13	-15	-16	-16	-14	-13	-14	-14
1928-34 Dry Period Average	-32	-32	-32	-32	-32	-32	-32	-32	-32	-32	-32
Dry Year Average	-9	-12	-11	-14	-14	-9	-1	6	14	11	11
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 75%											
Run Identifiers	SC034	SC035	SC036	SC037	SC038	SC039	SC040	SC041	SC042	SC043	SC044
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	8	19	30	34	36	37	38	39	40	40	40
1928-34 Dry Period Average	3	3	3	3	3	3	3	3	3	3	3
Dry Year Average	7	17	24	25	26	30	33	37	41	44	44
Critically Dry Year Average	2	5	7	7	7	7	7	7	7	7	7
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	5	17	20	21	21	21	22	25	27	26	26
1928-34 Dry Period Average	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29
Dry Year Average	-3	3	12	12	23	34	46	57	68	68	68
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 100%											
Run Identifiers:	SC045	SC046	SC047	SC048	SC049	SC050	SC051	SC052	SC053	SC054	SC055
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	15	36	50	55	57	57	59	63	66	66	66
1928-34 Dry Period Average	-26	-26	-26	-26	-26	-26	-26	-26	-26	-26	-26
Dry Year Average	3	20	36	48	63	78	92	107	120	120	120
Critically Dry Year Average	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37	-37
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

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Table SC-14

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC101	SC102	SC103	SC104	SC105	SC106	SC107	SC108	SC109	SC110	SC111
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	18	31	40	45	48	49	49	49	49	49	49
1928-34 Dry Period Average	25	49	62	62	62	62	62	62	62	62	62
Dry Year Average	29	52	69	77	79	79	79	79	79	79	79
Critically Dry Year Average	24	56	84	103	115	122	122	122	122	122	122
Minimum Annual	13	80	104	104	104	104	104	104	104	104	104
Ag & Urban Benefits											
71-Year Average	-28	-39	-50	-58	-63	-66	-70	-73	-77	-79	-83
1928-34 Dry Period Average	3	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Dry Year Average	-7	-13	-16	-20	-20	-26	-31	-31	-31	-31	-31
Critically Dry Year Average	2	1	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC112	SC113	SC114	SC115	SC116	SC117	SC118	SC119	SC120	SC121	SC122
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	15	26	34	40	43	45	47	47	47	47	47
1928-34 Dry Period Average	19	38	47	47	47	47	47	47	47	47	47
Dry Year Average	23	44	60	72	77	78	78	78	78	78	78
Critically Dry Year Average	18	38	62	76	91	101	109	112	112	112	112
Minimum Annual	3	49	66	66	66	66	66	66	66	66	66
Ag & Urban Benefits											
71-Year Average	-19	-20	-21	-22	-22	-25	-28	-29	-29	-33	-38
1928-34 Dry Period Average	7	-1	0	0	0	0	0	0	0	0	0
Dry Year Average	-1	3	17	20	32	26	27	34	40	30	30
Critically Dry Year Average	4	4	7	11	15	20	24	29	33	41	41
Minimum Annual	0	2	9	22	36	51	66	81	96	121	113

Facilities Allocation Factor = 50%											
Run Identifiers	SC123	SC124	SC125	SC126	SC127	SC128	SC129	SC130	SC131	SC132	SC133
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	10	19	27	32	36	39	41	43	44	45	45
1928-34 Dry Period Average	13	26	33	33	33	33	33	33	33	33	33
Dry Year Average	15	32	48	59	68	74	76	78	78	78	78
Critically Dry Year Average	12	22	39	51	61	70	80	86	93	102	102
Minimum Annual	2	18	29	29	29	29	29	29	29	29	29
Ag & Urban Benefits											
71-Year Average	-11	-5	-1	2	2	0	0	-3	-5	-9	-11
1928-34 Dry Period Average	12	9	13	13	13	13	13	13	13	13	13
Dry Year Average	6	23	45	58	70	64	67	65	62	66	70
Critically Dry Year Average	6	10	20	29	37	46	51	52	53	54	42
Minimum Annual	0	8	35	63	92	122	131	130	128	115	59

Facilities Allocation Factor = 75%											
Run Identifiers	SC134	SC135	SC136	SC137	SC138	SC139	SC140	SC141	SC142	SC143	SC144
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	5	11	18	22	25	26	28	30	31	33	34
1928-34 Dry Period Average	6	14	17	17	17	17	17	17	17	17	17
Dry Year Average	7	17	30	39	45	48	52	55	57	60	60
Critically Dry Year Average	6	10	15	22	29	35	41	47	51	56	63
Minimum Annual	1	3	4	4	4	4	4	4	4	4	4
Ag & Urban Benefits											
71-Year Average	-3	9	16	22	23	24	24	22	22	25	26
1928-34 Dry Period Average	17	19	24	24	24	24	24	24	24	24	24
Dry Year Average	15	40	76	90	97	99	99	99	101	114	120
Critically Dry Year Average	11	19	34	47	57	60	62	64	63	72	77
Minimum Annual	3	21	62	105	134	135	135	130	116	110	110

Facilities Allocation Factor = 100%											
Run Identifiers	SC145	SC146	SC147	SC148	SC149	SC150	SC151	SC152	SC153	SC154	SC155
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	5	23	39	46	50	52	54	56	58	63	63
1928-34 Dry Period Average	22	30	41	41	41	41	41	41	41	41	41
Dry Year Average	23	57	96	119	134	138	143	152	160	168	168
Critically Dry Year Average	15	28	48	65	74	85	102	110	117	143	143
Minimum Annual	5	34	89	147	167	199	248	250	250	250	250

Table SC-15

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC201	SC202	SC203	SC204	SC205	SC206	SC207	SC208	SC209	SC210	SC211
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	38	82	126	142	153	161	165	168	171	178	182
1928-34 Dry Period Average	15	30	45	45	45	45	45	45	45	45	45
Dry Year Average	32	77	150	191	230	252	267	267	279	294	294
Critically Dry Year Average	12	25	44	44	44	49	53	53	53	70	98
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-50	-71	-98	-108	-115	-118	-120	-122	-125	-126	-127
1928-34 Dry Period Average	-41	-52	-52	-52	-52	-52	-52	-52	-52	-52	-52
Dry Year Average	-40	-55	-64	-69	-74	-74	-74	-74	-74	-74	-74
Critically Dry Year Average	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41	-41
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC212	SC213	SC214	SC215	SC216	SC217	SC218	SC219	SC220	SC221	SC222
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	29	62	99	110	118	124	127	129	132	136	138
1928-34 Dry Period Average	12	19	28	28	28	28	28	28	28	28	28
Dry Year Average	24	55	108	132	156	168	179	190	193	205	214
Critically Dry Year Average	9	19	27	27	27	27	27	27	27	27	27
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-39	-47	-64	-70	-75	-77	-78	-80	-80	-78	-80
1928-34 Dry Period Average	-37	-45	-43	-43	-43	-43	-43	-43	-43	-43	-43
Dry Year Average	-33	-38	-37	-36	-37	-35	-33	-31	-28	-24	-26
Critically Dry Year Average	-40	-39	-37	-36	-36	-36	-35	-35	-35	-34	-34
Minimum Annual	0	1	7	7	7	7	7	7	7	7	7

Facilities Allocation Factor = 50%											
Run Identifiers	SC223	SC224	SC225	SC226	SC227	SC228	SC229	SC230	SC231	SC232	SC233
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	19	42	68	78	83	86	87	89	91	94	94
1928-34 Dry Period Average	8	13	13	13	13	13	13	13	13	13	13
Dry Year Average	16	37	68	82	95	103	110	118	125	140	141
Critically Dry Year Average	6	13	23	17	17	17	17	17	17	17	17
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-28	-29	-35	-36	-37	-38	-38	-38	-37	-36	-36
1928-34 Dry Period Average	-33	-35	-32	-32	-32	-32	-32	-32	-32	-32	-32
Dry Year Average	-25	-19	-5	3	7	11	14	16	18	21	21
Critically Dry Year Average	-39	-35	-25	-20	-19	-18	-17	-15	-13	-11	-11
Minimum Annual	0	8	34	49	50	51	51	51	51	51	51

Facilities Allocation Factor = 75%											
Run Identifiers	SC234	SC235	SC236	SC237	SC238	SC239	SC240	SC241	SC242	SC243	SC244
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	10	21	35	40	43	44	45	46	46	48	48
1928-34 Dry Period Average	4	6	6	6	6	6	6	6	6	6	6
Dry Year Average	8	18	29	32	36	36	36	38	42	46	46
Critically Dry Year Average	3	6	12	9	9	9	9	9	9	9	9
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-19	-11	-6	-2	-1	1	1	2	4	6	6
1928-34 Dry Period Average	-28	-25	-20	-20	-20	-20	-20	-20	-20	-20	-20
Dry Year Average	-17	1	31	48	54	57	60	64	67	75	75
Critically Dry Year Average	-36	-28	-13	-3	0	4	7	9	12	19	19
Minimum Annual	2	20	61	94	96	102	103	103	103	103	103

Facilities Allocation Factor = 100%											
Run Identifiers	SC245	SC246	SC247	SC248	SC249	SC250	SC251	SC252	SC253	SC254	SC255
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-10	8	23	31	34	37	39	40	43	47	47
1928-34 Dry Period Average	-23	-16	-5	-5	-5	-5	-5	-5	-5	-5	-5
Dry Year Average	-8	22	67	87	102	107	112	120	128	139	139
Critically Dry Year Average	-33	-20	-1	17	25	37	54	61	69	91	91
Minimum Annual	5	33	88	144	164	194	245	247	247	247	247

Table SC-16

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC301	SC302	SC303	SC304	SC305	SC306	SC307	SC308	SC309	SC310	SC311
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	17	28	37	42	45	46	47	47	47	47	47
1928-34 Dry Period Average	21	38	42	42	42	42	42	42	42	42	42
Dry Year Average	28	48	68	77	79	79	79	79	79	79	79
Critically Dry Year Average	17	43	66	85	98	108	109	109	109	109	109
Minimum Annual	13	42	50	50	50	50	50	50	50	50	50
Ag & Urban Benefits											
71-Year Average	-5	-14	-26	-35	-40	-43	-47	-50	-52	-58	-62
1928-34 Dry Period Average	8	6	6	6	6	6	6	6	6	6	6
Dry Year Average	13	11	4	4	-4	-7	-7	-8	-9	-11	-12
Critically Dry Year Average	8	7	7	7	7	7	7	7	7	7	7
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC312	SC313	SC314	SC315	SC316	SC317	SC318	SC319	SC320	SC321	SC322
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	13	24	31	37	41	43	44	45	45	45	45
1928-34 Dry Period Average	16	29	32	32	32	32	32	32	32	32	32
Dry Year Average	22	41	57	72	76	78	78	78	78	78	78
Critically Dry Year Average	12	28	49	63	78	88	96	102	102	102	102
Minimum Annual	3	20	26	26	26	26	26	26	26	26	26
Ag & Urban Benefits											
71-Year Average	3	5	3	1	-4	-7	-9	-11	-14	-20	-25
1928-34 Dry Period Average	11	9	9	9	9	9	9	9	9	9	9
Dry Year Average	18	23	25	24	15	14	15	16	16	21	28
Critically Dry Year Average	8	8	8	8	8	8	8	8	8	8	8
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 50%											
Run Identifiers	SC323	SC324	SC325	SC326	SC327	SC328	SC329	SC330	SC331	SC332	SC333
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	9	18	25	30	34	37	39	40	41	43	43
1928-34 Dry Period Average	11	20	22	22	22	22	22	22	22	22	22
Dry Year Average	15	30	45	56	65	70	72	74	74	74	74
Critically Dry Year Average	8	15	30	42	52	60	70	76	82	92	95
Minimum Annual	2	5	6	6	6	6	6	6	6	6	6
Ag & Urban Benefits											
71-Year Average	12	21	25	23	20	18	14	11	9	7	9
1928-34 Dry Period Average	14	13	13	13	13	13	13	13	13	13	13
Dry Year Average	24	34	37	36	33	38	45	52	58	65	77
Critically Dry Year Average	9	9	9	9	9	9	9	9	9	9	9
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 75%											
Run Identifiers	SC334	SC335	SC336	SC337	SC338	SC339	SC340	SC341	SC342	SC343	SC344
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	5	10	16	20	22	24	25	26	27	28	29
1928-34 Dry Period Average	6	10	11	11	11	11	11	11	11	11	11
Dry Year Average	7	16	28	35	39	42	46	47	47	50	52
Critically Dry Year Average	4	7	12	17	23	30	35	39	42	46	50
Minimum Annual	1	2	3	3	3	3	3	3	3	3	3
Ag & Urban Benefits											
71-Year Average	21	36	43	44	44	43	40	41	43	45	43
1928-34 Dry Period Average	16	16	16	16	16	16	16	16	16	16	16
Dry Year Average	30	41	52	55	65	76	85	93	103	118	111
Critically Dry Year Average	11	11	11	11	11	11	11	11	11	11	11
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 100%											
Run Identifiers	SC345	SC346	SC347	SC348	SC349	SC350	SC351	SC352	SC353	SC354	SC355
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	30	51	65	71	72	73	75	79	82	82	82
1928-34 Dry Period Average	19	19	19	19	19	19	19	19	19	19	19
Dry Year Average	36	57	73	85	100	115	129	144	157	157	157
Critically Dry Year Average	12	12	12	12	12	12	12	12	12	12	12
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Table SC-17

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC401	SC402	SC403	SC404	SC405	SC406	SC407	SC408	SC409	SC410	SC411
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	57	118	170	199	218	231	244	257	270	293	307
1928-34 Dry Period Average	26	63	96	130	139	139	139	139	139	139	139
Dry Year Average	66	133	212	277	334	367	387	415	442	477	481
Critically Dry Year Average	9	26	69	113	141	162	183	205	227	292	332
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-30	-45	-52	-59	-64	-70	-74	-78	-80	-82	-83
1928-34 Dry Period Average	-10	-22	-22	-22	-29	-29	-29	-29	-29	-29	-29
Dry Year Average	-62	-78	-83	-84	-84	-89	-93	-93	-93	-93	-93
Critically Dry Year Average	-12	-12	-12	-12	-12	-12	-12	-12	-12	-13	-13
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC412	SC413	SC414	SC415	SC416	SC417	SC418	SC419	SC420	SC421	SC422
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	43	91	136	159	173	187	198	208	218	235	249
1928-34 Dry Period Average	21	48	73	98	98	98	98	98	98	98	98
Dry Year Average	50	97	150	200	263	303	334	351	383	405	421
Critically Dry Year Average	7	17	47	80	97	113	129	145	161	193	243
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-12	-6	8	15	18	19	21	25	29	26	24
1928-34 Dry Period Average	-3	-6	3	-3	-3	-3	-3	-3	-3	-3	-3
Dry Year Average	-45	-46	-46	-38	-36	-36	-38	-37	-33	-26	-18
Critically Dry Year Average	-10	-7	-8	-3	1	1	1	0	5	9	6
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 50%											
Run Identifiers	SC423	SC424	SC425	SC426	SC427	SC428	SC429	SC430	SC431	SC432	SC433
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	29	63	95	109	121	131	139	148	156	167	174
1928-34 Dry Period Average	14	32	49	65	69	69	69	69	69	69	69
Dry Year Average	33	65	97	129	169	199	229	253	265	289	317
Critically Dry Year Average	5	11	25	49	61	72	83	93	104	125	147
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	5	28	61	77	87	94	98	102	108	112	116
1928-34 Dry Period Average	4	10	28	27	23	23	23	23	23	23	23
Dry Year Average	-28	-12	-4	12	17	27	40	59	68	79	82
Critically Dry Year Average	-7	-7	3	3	7	17	16	14	12	9	20
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 75%											
Run Identifiers	SC434	SC435	SC436	SC437	SC438	SC439	SC440	SC441	SC442	SC443	SC444
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	15	32	52	61	67	72	77	81	84	90	93
1928-34 Dry Period Average	7	16	24	27	27	27	27	27	27	27	27
Dry Year Average	17	32	49	61	76	91	106	121	133	152	164
Critically Dry Year Average	2	6	13	22	27	28	28	28	37	46	55
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	22	62	108	135	153	160	172	180	188	197	203
1928-34 Dry Period Average	11	26	50	48	48	48	48	48	48	48	48
Dry Year Average	-12	20	38	58	80	118	156	194	224	227	221
Critically Dry Year Average	-6	-2	5	14	29	34	34	34	35	35	35
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 100%											
Run Identifiers	SC445	SC446	SC447	SC448	SC449	SC450	SC451	SC452	SC453	SC454	SC455
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	38	94	156	193	218	232	246	256	270	283	292
1928-34 Dry Period Average	18	42	73	73	73	73	73	73	73	73	73
Dry Year Average	5	52	80	116	171	232	300	342	371	374	400
Critically Dry Year Average	-6	3	9	30	52	72	72	72	72	79	116
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Table SC-18

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC501	SC502	SC503	SC504	SC505	SC506	SC507	SC508	SC509	SC510	SC511
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	37	58	74	82	88	91	93	93	93	93	93
1928-34 Dry Period Average	31	66	97	126	153	163	163	163	163	163	163
Dry Year Average	84	116	138	146	146	146	146	146	146	146	146
Critically Dry Year Average	24	80	144	188	222	247	259	259	259	259	259
Minimum Annual	0	90	131	314	410	410	410	410	410	410	410
Ag & Urban Benefits											
71-Year Average	-55	-63	-67	-71	-74	-75	-77	-78	-79	-85	-85
1928-34 Dry Period Average	-13	-15	-15	-15	-15	-15	-15	-15	-15	-15	-15
Dry Year Average	-46	-59	-61	-63	-64	-65	-66	-68	-71	-78	-79
Critically Dry Year Average	11	11	11	11	11	11	11	11	11	11	11
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC512	SC513	SC514	SC515	SC516	SC517	SC518	SC519	SC520	SC521	SC522
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	29	50	64	74	79	82	84	86	88	88	88
1928-34 Dry Period Average	23	50	74	98	118	126	126	126	126	126	126
Dry Year Average	66	111	125	138	138	138	138	138	138	138	138
Critically Dry Year Average	18	50	111	144	179	197	211	224	236	236	236
Minimum Annual	0	40	40	134	287	308	308	308	308	308	308
Ag & Urban Benefits											
71-Year Average	-40	-33	-21	-12	0	8	13	18	22	30	38
1928-34 Dry Period Average	-5	3	11	19	28	23	23	23	23	23	23
Dry Year Average	-28	-24	-7	8	24	37	44	54	56	68	80
Critically Dry Year Average	15	19	27	31	36	41	46	51	57	68	81
Minimum Annual	0	3	17	31	46	61	76	91	107	138	169

Facilities Allocation Factor = 50%											
Run Identifiers	SC523	SC524	SC525	SC526	SC527	SC528	SC529	SC530	SC531	SC532	SC533
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	20	40	52	60	68	72	74	75	77	79	82
1928-34 Dry Period Average	15	34	50	66	82	87	87	87	87	87	87
Dry Year Average	44	87	107	115	129	134	134	134	134	134	134
Critically Dry Year Average	11	25	65	100	123	139	150	159	168	185	203
Minimum Annual	0	0	0	0	39	77	77	77	77	77	77
Ag & Urban Benefits											
71-Year Average	-26	-11	14	31	44	54	63	73	78	87	100
1928-34 Dry Period Average	4	19	35	52	70	69	69	69	69	69	69
Dry Year Average	-10	12	44	73	90	110	134	158	168	204	239
Critically Dry Year Average	19	29	46	57	69	81	93	104	116	140	161
Minimum Annual	1	16	44	72	102	134	164	195	226	292	397

Facilities Allocation Factor = 75%											
Run Identifiers	SC534	SC535	SC536	SC537	SC538	SC539	SC540	SC541	SC542	SC543	SC544
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	10	23	35	41	46	49	52	55	59	64	65
1928-34 Dry Period Average	8	17	25	34	42	45	45	45	45	45	45
Dry Year Average	22	48	72	84	88	95	102	108	115	127	127
Critically Dry Year Average	5	12	25	39	55	68	79	87	92	97	103
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-14	12	46	66	82	93	105	114	119	137	149
1928-34 Dry Period Average	11	36	60	85	109	112	112	112	112	112	112
Dry Year Average	9	50	98	134	164	196	233	264	283	328	362
Critically Dry Year Average	23	39	66	86	113	132	149	166	182	220	259
Minimum Annual	5	29	71	115	160	207	254	315	394	413	433

Facilities Allocation Factor = 100%											
Run Identifiers	SC545	SC546	SC547	SC548	SC549	SC550	SC551	SC552	SC553	SC554	SC555
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-3	35	77	101	116	131	145	155	163	185	202
1928-34 Dry Period Average	18	52	84	117	148	155	155	155	155	155	155
Dry Year Average	30	92	151	195	239	284	320	344	371	420	447
Critically Dry Year Average	28	49	87	120	157	184	209	235	260	311	363
Minimum Annual	10	43	100	159	219	281	397	410	423	450	479

Table SC-19

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC601	SC602	SC603	SC604	SC605	SC606	SC607	SC608	SC609	SC610	SC611
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	61	126	183	212	231	245	258	270	283	307	322
1928-34 Dry Period Average	32	69	102	136	155	155	155	155	155	155	155
Dry Year Average	79	157	249	315	368	400	423	450	469	503	516
Critically Dry Year Average	15	31	75	119	153	174	196	217	251	324	365
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-82	-97	-103	-111	-113	-118	-122	-124	-128	-131	-132
1928-34 Dry Period Average	-33	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35
Dry Year Average	-100	-123	-126	-126	-126	-132	-133	-133	-133	-133	-133
Critically Dry Year Average	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24	-24
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC612	SC613	SC614	SC615	SC616	SC617	SC618	SC619	SC620	SC621	SC622
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	47	98	145	168	184	197	207	217	226	243	256
1928-34 Dry Period Average	24	52	77	102	110	110	110	110	110	110	110
Dry Year Average	59	115	181	221	278	319	344	361	376	413	416
Critically Dry Year Average	11	22	52	87	111	128	144	160	176	212	266
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-64	-62	-53	-48	-44	-41	-40	-39	-35	-30	-27
1928-34 Dry Period Average	-24	-17	-9	-1	3	3	3	3	3	3	3
Dry Year Average	-80	-83	-70	-63	-52	-47	-38	-34	-27	-19	-11
Critically Dry Year Average	-20	-16	-8	-4	1	5	10	14	19	28	39
Minimum Annual	0	3	16	30	44	59	73	89	105	137	168

Facilities Allocation Factor = 50%											
Run Identifiers	SC623	SC624	SC625	SC626	SC627	SC628	SC629	SC630	SC631	SC632	SC633
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	31	67	105	125	136	146	155	162	167	178	188
1928-34 Dry Period Average	16	35	51	68	65	65	65	65	65	65	65
Dry Year Average	40	77	112	136	153	199	224	242	254	278	297
Critically Dry Year Average	8	14	32	56	66	77	88	99	110	131	153
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-49	-36	-15	-2	10	18	22	26	31	40	49
1928-34 Dry Period Average	-16	-1	15	32	48	48	48	48	48	48	48
Dry Year Average	-60	-43	-15	11	26	46	68	83	99	129	153
Critically Dry Year Average	-16	-6	11	22	32	43	54	65	76	100	123
Minimum Annual	1	16	43	71	101	128	159	192	222	285	354

Facilities Allocation Factor = 75%											
Run Identifiers	SC634	SC635	SC636	SC637	SC638	SC639	SC640	SC641	SC642	SC643	SC644
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	16	35	57	72	77	84	91	97	102	109	114
1928-34 Dry Period Average	8	17	26	34	31	28	28	28	28	28	28
Dry Year Average	20	40	53	60	70	81	92	102	113	131	145
Critically Dry Year Average	4	7	13	22	26	30	35	41	47	58	69
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-36	-11	21	40	58	67	75	80	87	100	115
1928-34 Dry Period Average	-9	16	40	65	88	91	91	91	91	91	91
Dry Year Average	-39	-4	43	84	114	147	182	208	234	273	305
Critically Dry Year Average	-12	4	31	51	77	96	113	131	149	186	224
Minimum Annual	5	29	71	113	158	203	251	296	344	410	429

Facilities Allocation Factor = 100%											
Run Identifiers	SC645	SC646	SC647	SC648	SC649	SC650	SC651	SC652	SC653	SC654	SC655
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	-24	14	56	80	96	111	126	136	144	165	179
1928-34 Dry Period Average	-2	32	64	97	128	134	134	134	134	134	134
Dry Year Average	-17	42	103	147	191	236	278	308	338	392	416
Critically Dry Year Average	-7	14	53	85	123	150	179	204	230	281	332
Minimum Annual	10	42	99	157	217	279	343	410	423	450	478

Table SC-20

South of Delta Off-Aqueduct Storage
Net Combined Environmental and Ag & Urban
Water Supply Benefits versus Storage Volume

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

(Values in thousands of acre-feet)

Facilities Allocation Factor = 0%											
Run Identifiers	SC701	SC702	SC703	SC704	SC705	SC706	SC707	SC708	SC709	SC710	SC711
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	34	54	71	80	85	88	91	92	92	92	92
1928-34 Dry Period Average	27	61	92	121	148	151	151	151	151	151	151
Dry Year Average	77	109	135	146	146	146	146	146	146	146	146
Critically Dry Year Average	16	68	131	172	207	226	244	251	251	251	251
Minimum Annual	0	81	123	289	386	404	404	404	404	404	404
Ag & Urban Benefits											
71-Year Average	-3	-11	-15	-19	-23	-25	-27	-28	-30	-32	-33
1928-34 Dry Period Average	10	-2	-2	-2	-6	-9	-9	-9	-9	-9	-9
Dry Year Average	-7	-18	-21	-23	-24	-26	-29	-29	-37	-37	-37
Critically Dry Year Average	23	23	23	23	23	23	23	23	22	22	22
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 25%											
Run Identifiers	SC712	SC713	SC714	SC715	SC716	SC717	SC718	SC719	SC720	SC721	SC722
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	27	47	61	72	77	80	82	84	86	87	87
1928-34 Dry Period Average	21	46	70	92	114	116	116	116	116	116	116
Dry Year Average	60	101	115	135	138	138	138	138	138	138	136
Critically Dry Year Average	12	43	103	137	167	181	194	206	221	230	230
Minimum Annual	0	34	34	126	279	289	289	289	289	289	289
Ag & Urban Benefits											
71-Year Average	12	23	46	58	68	77	85	94	101	111	120
1928-34 Dry Period Average	17	14	23	31	19	17	17	17	17	17	17
Dry Year Average	7	10	28	39	41	43	46	51	45	52	56
Critically Dry Year Average	25	28	27	32	36	36	35	35	40	50	61
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0

Facilities Allocation Factor = 50%											
Run Identifiers	SC723	SC724	SC725	SC726	SC727	SC728	SC729	SC730	SC731	SC732	SC733
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	19	37	49	57	64	70	72	73	74	77	80
1928-34 Dry Period Average	14	31	47	64	79	80	80	80	80	80	80
Dry Year Average	40	79	98	108	121	133	134	134	134	134	134
Critically Dry Year Average	7	22	60	95	117	128	138	146	155	173	191
Minimum Annual	0	0	0	0	29	38	38	38	38	38	38
Ag & Urban Benefits											
71-Year Average	28	56	94	116	132	144	155	162	168	184	187
1928-34 Dry Period Average	24	30	47	62	45	43	43	43	43	43	43
Dry Year Average	23	42	69	73	86	103	117	136	151	196	202
Critically Dry Year Average	28	28	38	38	42	52	63	73	84	105	115
Minimum Annual	0	0	0	0	0	0	0	0	0	0	12

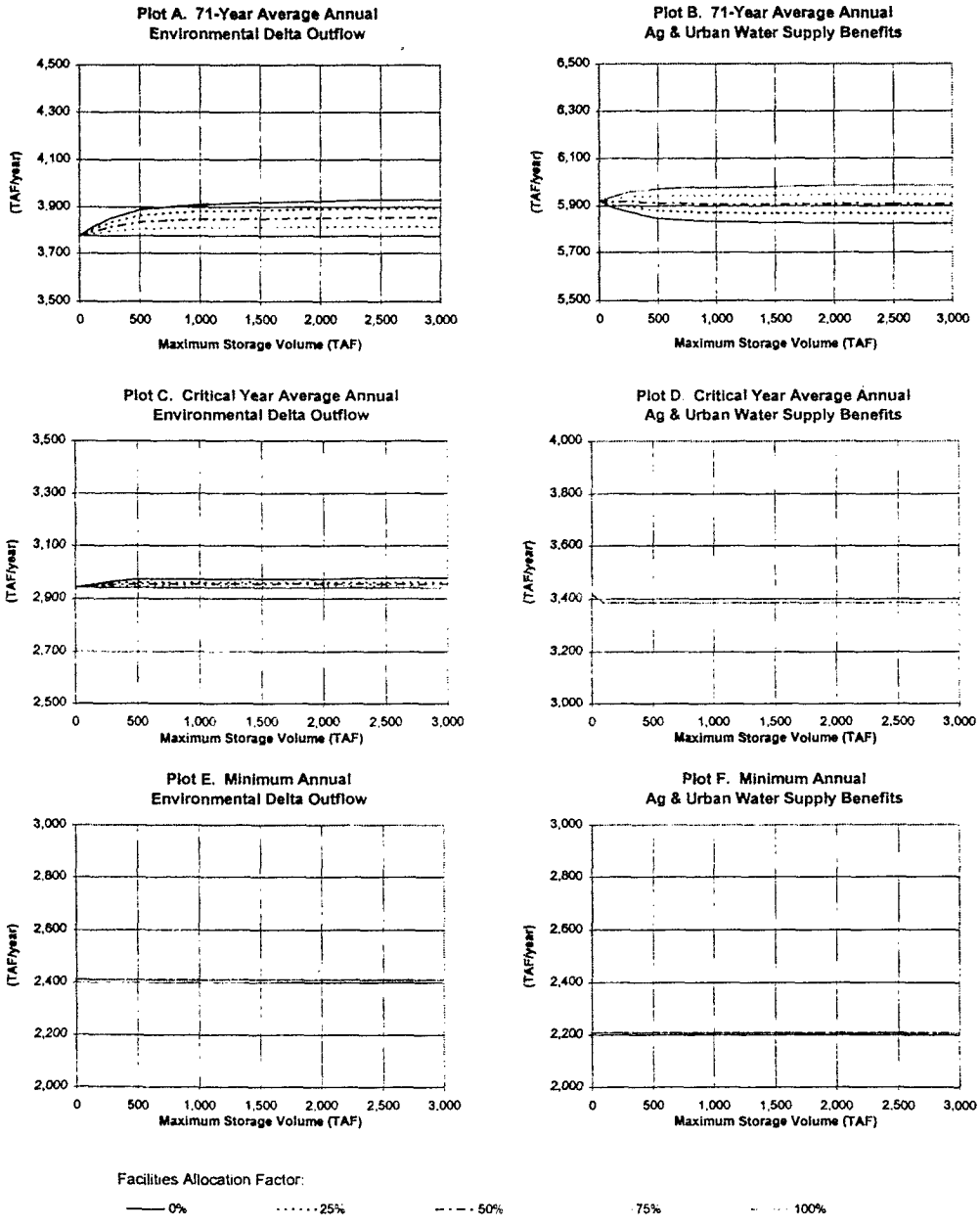
Facilities Allocation Factor = 75%											
Run Identifiers	SC734	SC735	SC736	SC737	SC738	SC739	SC740	SC741	SC742	SC743	SC744
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	9	21	32	36	40	43	46	49	52	57	60
1928-34 Dry Period Average	7	16	24	32	40	41	41	41	41	41	41
Dry Year Average	20	42	65	74	78	81	88	95	103	112	120
Critically Dry Year Average	3	9	22	39	51	64	74	83	88	97	101
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	45	86	136	169	190	202	215	226	235	245	252
1928-34 Dry Period Average	31	46	72	78	69	69	69	69	69	69	69
Dry Year Average	39	74	98	120	143	181	228	270	292	306	297
Critically Dry Year Average	29	32	39	48	64	79	95	111	120	119	119
Minimum Annual	0	0	0	0	0	0	0	0	24	15	11

Facilities Allocation Factor = 100%											
Run Identifiers	SC745	SC746	SC747	SC748	SC749	SC750	SC751	SC752	SC753	SC754	SC755
Maximum Storage Volume (TAF)	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000
Environmental Benefits											
71-Year Average	0	0	0	0	0	0	0	0	0	0	0
1928-34 Dry Period Average	0	0	0	0	0	0	0	0	0	0	0
Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Critically Dry Year Average	0	0	0	0	0	0	0	0	0	0	0
Minimum Annual	0	0	0	0	0	0	0	0	0	0	0
Ag & Urban Benefits											
71-Year Average	60	117	182	220	247	261	279	292	304	316	326
1928-34 Dry Period Average	38	62	94	94	94	94	94	94	94	94	94
Dry Year Average	56	108	137	173	227	288	346	375	406	422	451
Critically Dry Year Average	29	38	44	65	86	107	125	125	125	154	192
Minimum Annual	0	0	0	0	0	0	0	0	0	236	353

Figure SC-5

South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

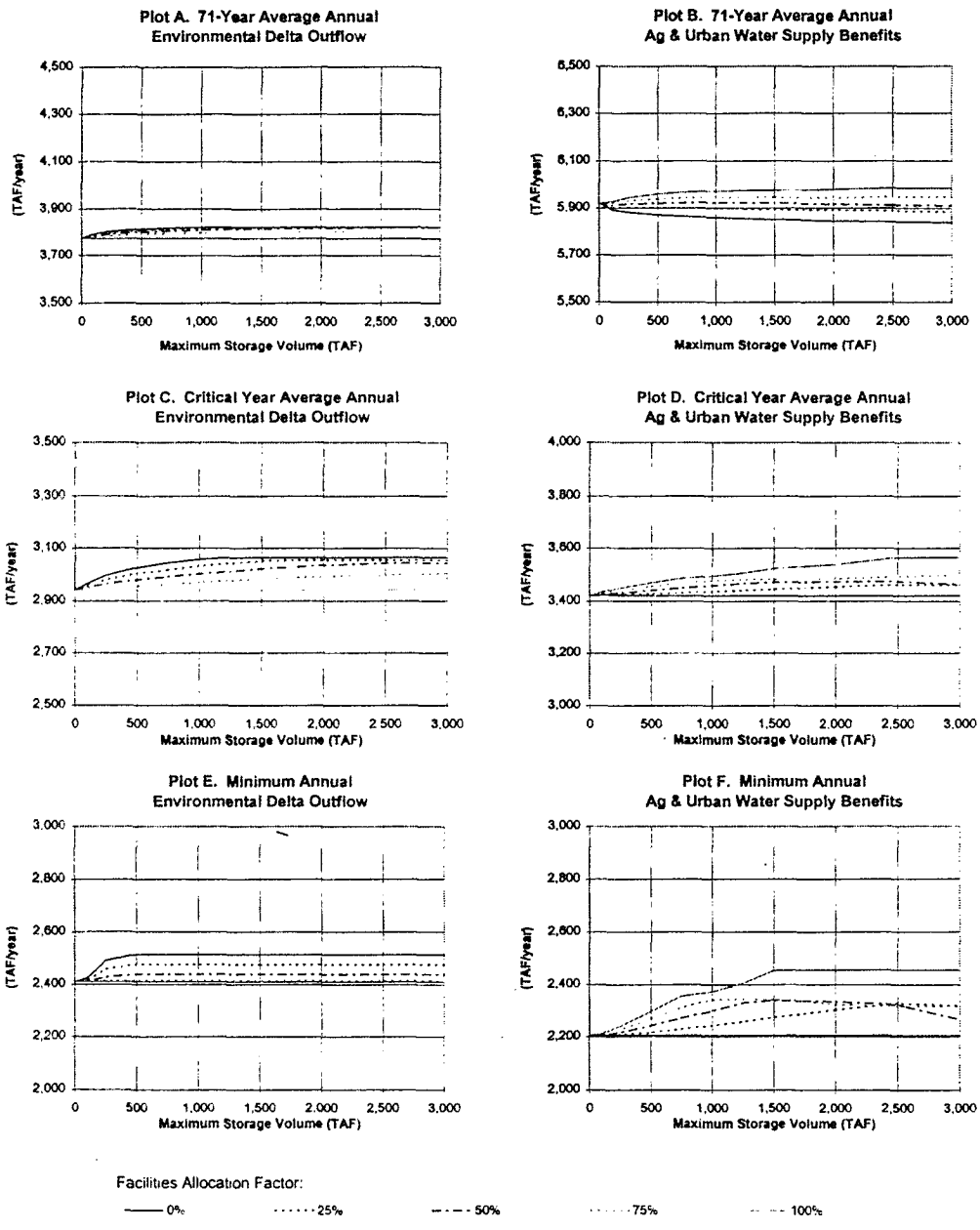
SC_RV1.XLS 6 Charts

D-006731

Figure SC-6

South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

SC_RV2.XLS: 6 Charts

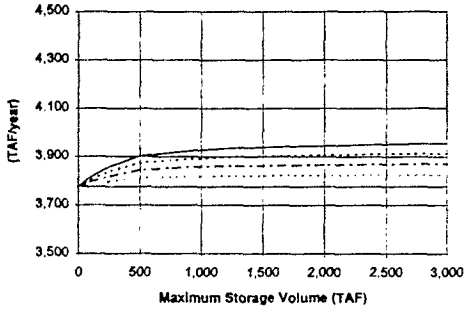
D-006732

Figure SC-7

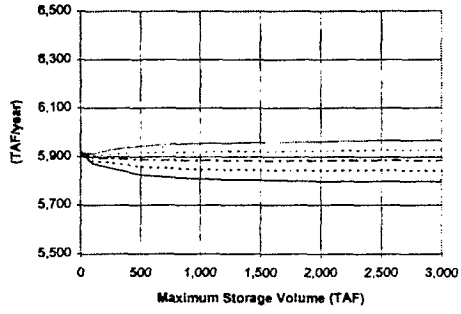
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity

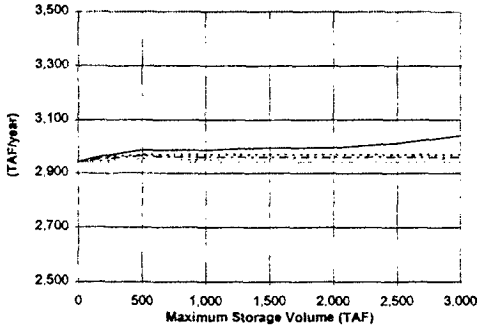
Plot A. 71-Year Average Annual Environmental Delta Outflow



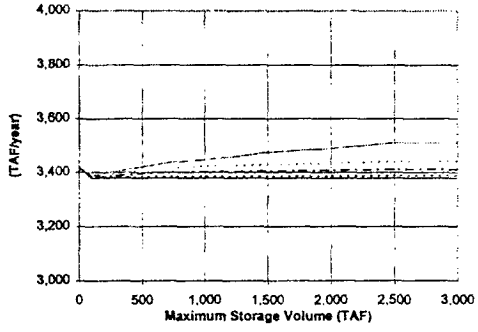
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



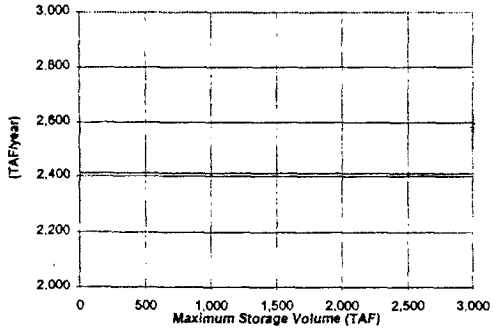
Plot C. Critical Year Average Annual Environmental Delta Outflow



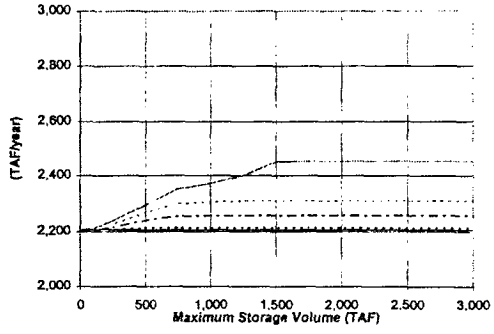
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:

0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

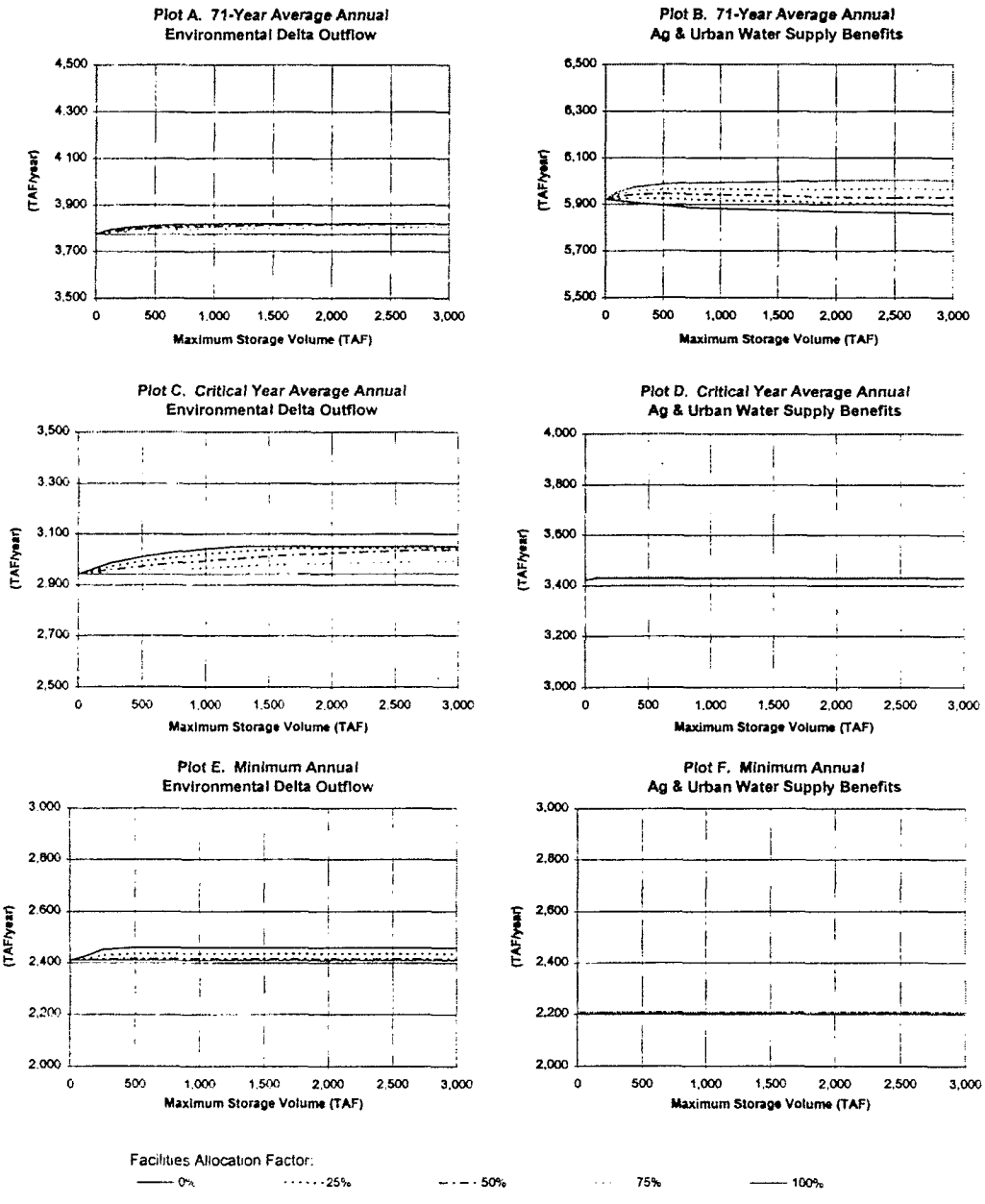
SC_RV3.XLS 6 Charts

D-006733

Figure SC-8

South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Existing Banks PP Capacity



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply

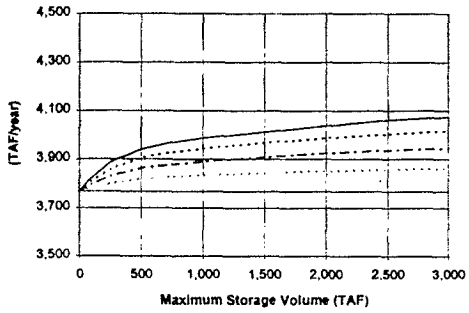
SC_RV4.XLS 6 Charts

Figure SC-9

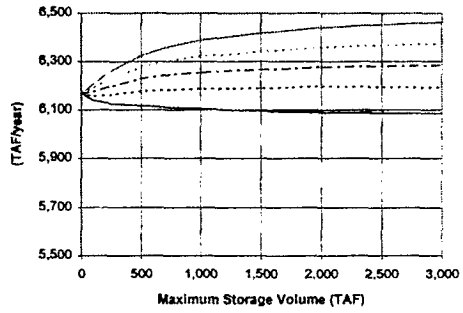
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

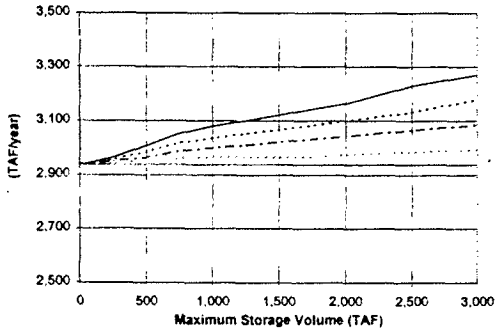
Plot A. 71-Year Average Annual Environmental Delta Outflow



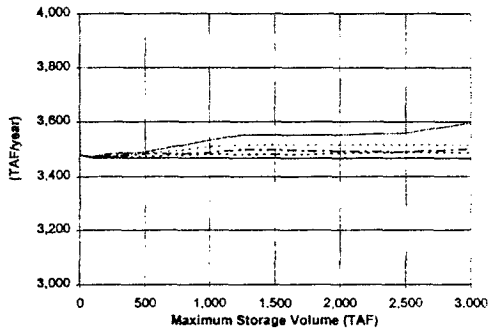
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



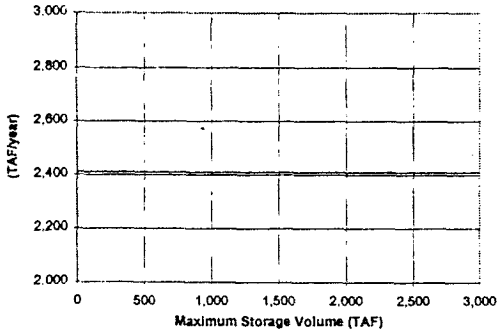
Plot C. Critical Year Average Annual Environmental Delta Outflow



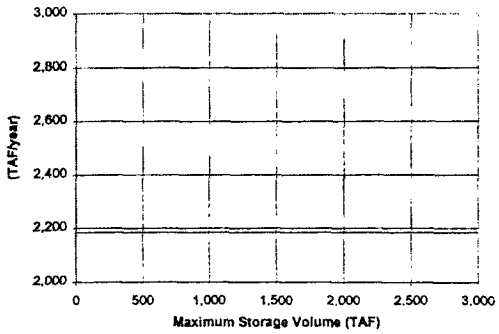
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

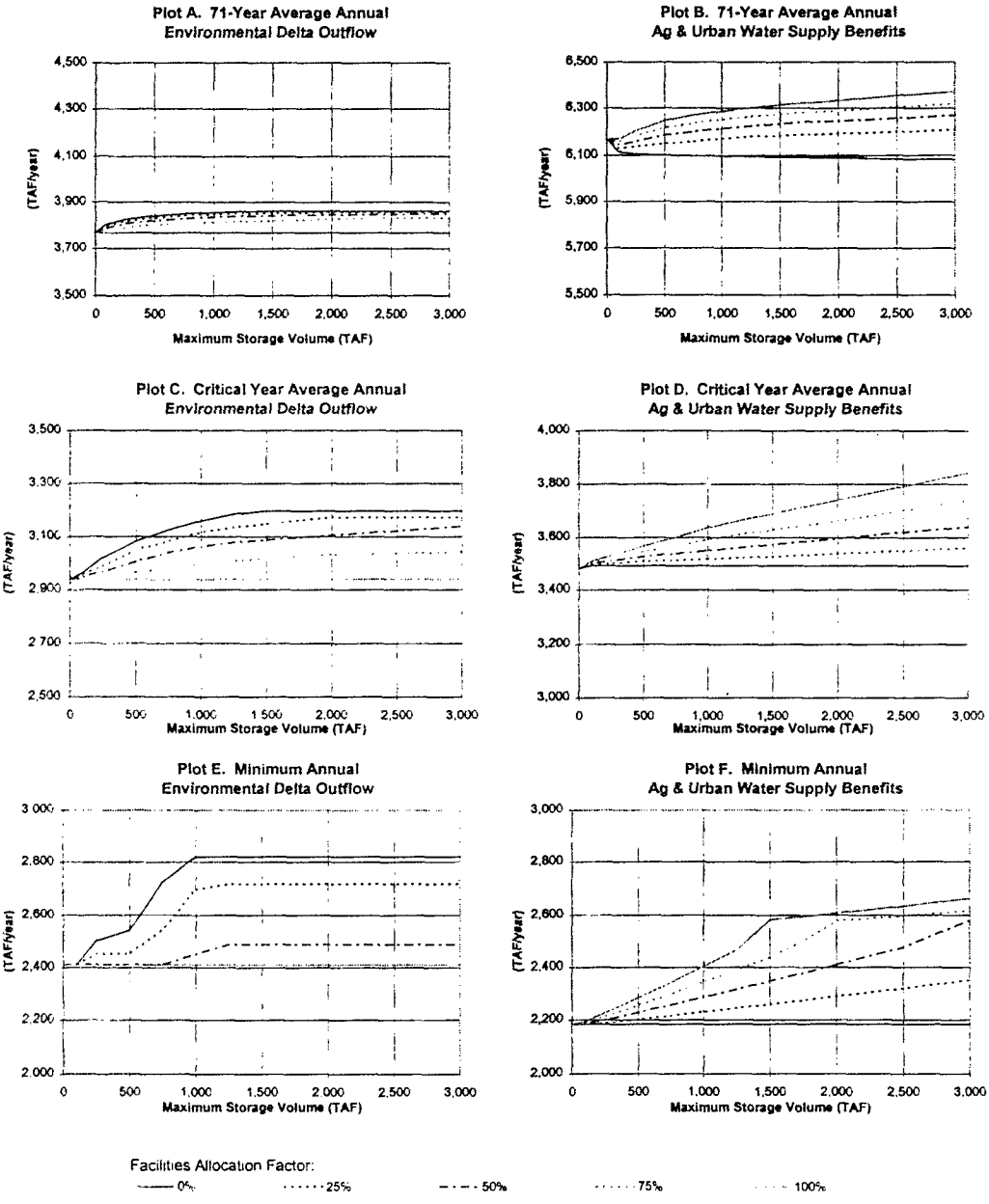
SC_RV5.XLS 6 Charts

D-006735

Figure SC-10

South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity



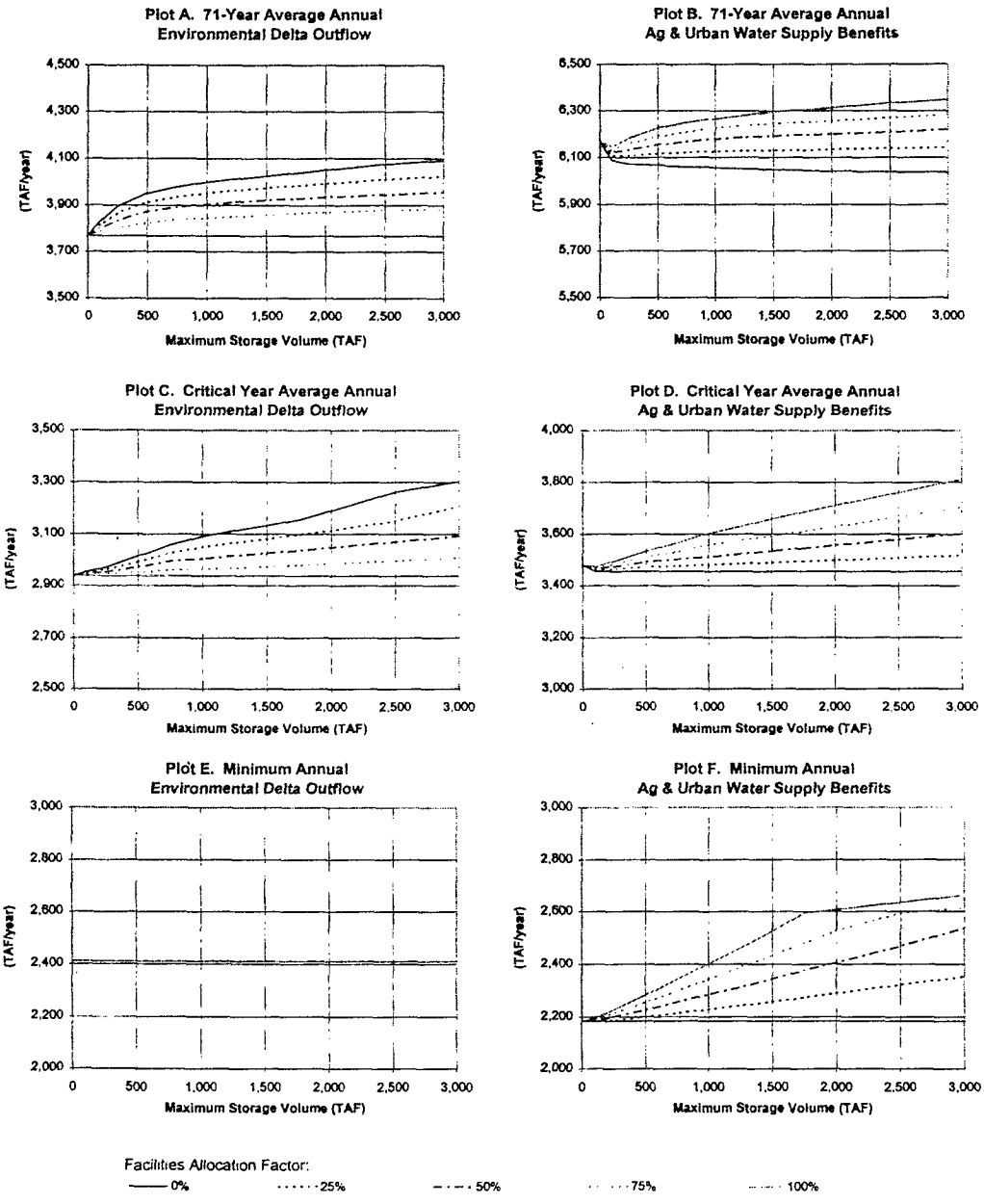
Note: 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply.
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

D-006736

Figure SC-11

South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Normal Period Supply Operation, Ag & Urban: Dry Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity



Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

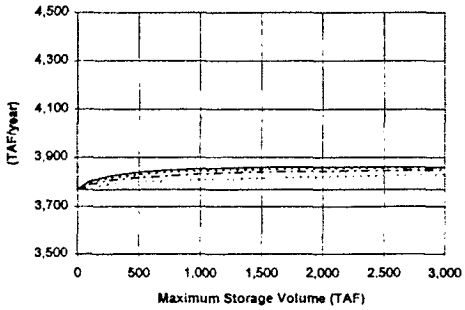
SC_RV7.XLS 6 Chart

Figure SC-12

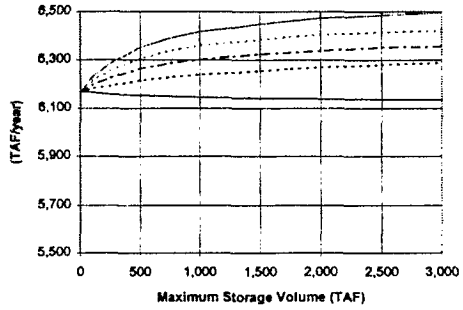
South of Delta Off-Aqueduct Storage
Combined Environmental -- Ag & Urban Water Supply Benefits

Environmental: Dry Period Supply Operation, Ag & Urban: Normal Period Supply Operation
3500 cfs Conveyance Capacity
With Expanded Banks PP Capacity

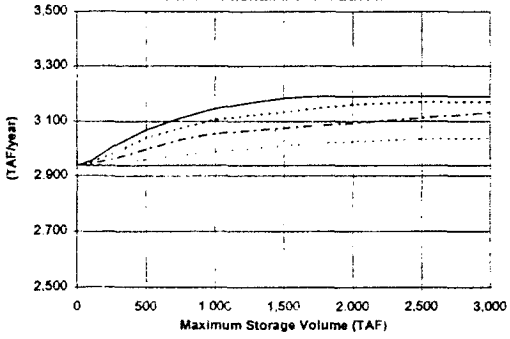
Plot A. 71-Year Average Annual Environmental Delta Outflow



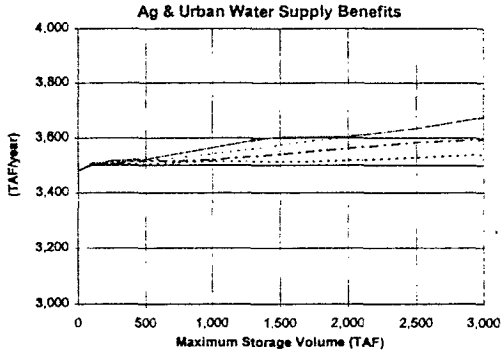
Plot B. 71-Year Average Annual Ag & Urban Water Supply Benefits



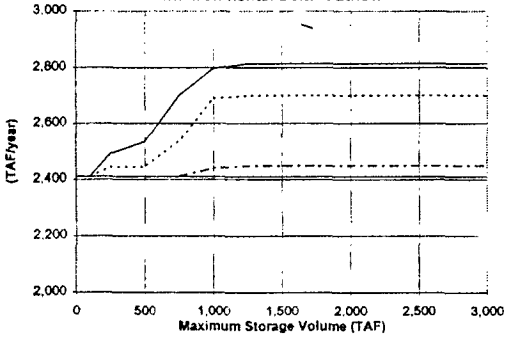
Plot C. Critical Year Average Annual Environmental Delta Outflow



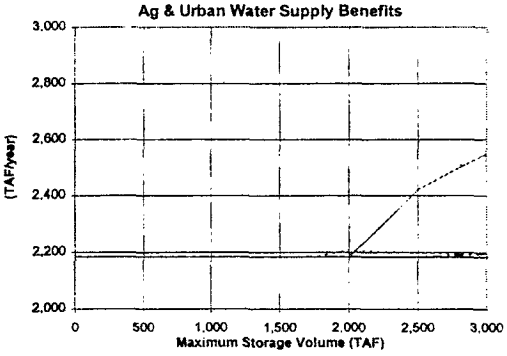
Plot D. Critical Year Average Annual Ag & Urban Water Supply Benefits



Plot E. Minimum Annual Environmental Delta Outflow



Plot F. Minimum Annual Ag & Urban Water Supply Benefits



Facilities Allocation Factor:
0% 25% 50% 75% 100%

Note 0% Facilities Allocation Factor indicates entire storage dedicated to environmental water supply
100% Facilities Allocation Factor indicates entire storage dedicated to ag & urban water supply.

SC_RV8.XLS 6 Chart

D-006738

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